

## **APPENDIX A**

### **Method of Estimating the Flow from a Drill Hole**

sanjuan\sunny\110361\oct91.Rpt

A - 1

 **SIMON** HYDRO-SEARCH

## Appendix A: Method of Estimating the Flow from a Drill Hole

Mr. Bob Ward (mine superintendent during construction of the American Tunnel) supplied the following estimates of conditions concerning the drill hole intersection of the Washington vein:

- The drill hole was approximately 4½ feet above the floor,
- The drill hole was 2 inches in diameter (BX bit),
- The hole was drilled at an upward angle of 7 to 8 degrees from the horizontal, and
- The water hit the floor approximately 20 feet from where it left the drill hole.

From the above information an estimate can be made of the rate of flow of water from the drill hole. The flow from the drill hole dropped to the floor due to 1) an initial downward component of velocity resulting from the angle of the drill hole, and 2) the acceleration of gravity.

The loss in elevation caused by the angle of the drill hole (assumed to be 7½ degrees) is :

$$\text{Elev.} = (20 \text{ feet}) \div \cos (7\frac{1}{2} \text{ degrees}) = 2.63 \text{ feet}$$

Hence, the loss in elevation caused by the acceleration of gravity is:

$$4.5 \text{ feet} - 2.63 \text{ feet} = 1.87 \text{ feet,}$$

where 4.5 feet is the initial height above the floor.

The time it takes for an object to drop 1.87 feet under the acceleration of gravity is calculated using the following equation:

$$\text{Distance} = \frac{1}{2}(\text{acceleration}) \times (\text{time})^2$$

or

$$1.87 \text{ feet} = \frac{1}{2}(32.2 \text{ feet/second}^2) \times t^2$$

$$t = 0.341 \text{ seconds}$$

The exit velocity is calculated as follows:

$$\begin{aligned} \text{Velocity} &= [(20 \text{ feet}) \div (0.341 \text{ seconds})] \div \cos 7\frac{1}{2} \text{ degrees} \\ &= 59.2 \text{ feet/sec} \end{aligned}$$

The cross-sectional area of the drill hole is calculated as:

$$\text{Area} = \pi r^2 = \pi \times (1/12)^2 = 0.0218 \text{ feet}^2$$

The rate of flow is:

$$\text{Velocity} \times \text{Area} = 59.2 \text{ feet/sec} \times 0.0218 \text{ feet}^2 = 1.29 \text{ feet}^3/\text{second}$$

$$1.29 \text{ feet}^3/\text{sec} \times 60 \text{ sec/min} \times 7.48 \text{ gal/foot}^3 = 579 \text{ gallons/minute}$$

This value is only accurate to one significant figure and is better expressed as:

$$6 \times 10^2 \text{ gallons/minute}$$

## **APPENDIX B**

### **Results of Permeability Testing of Clays Beneath Lake Emma**

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B - 1

 **simon** HYDRO-SEARCH

# Lambert and Associates

CONSULTING GEOTECHNICAL ENGINEERS AND MATERIAL TESTING

August 22, 1988

Sunnyside Gold Corporation  
p. O. Box 177  
Silverton, CO 81433

PN: M88052MT

Attention: Mike Foutz

Subject: Permeability tests results for  
Two (2) Sampled Delivered to our Laboratory

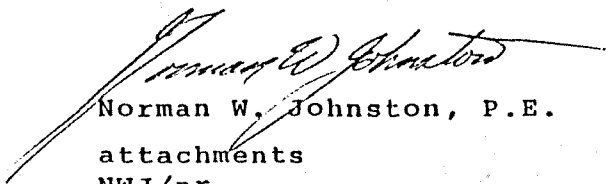
Mr. Foutz:

This letter presents the results of permeability tests performed on two (2) samples of material received in our laboratory on August 10, 1988. As your requested our laboratory tests included performing standard moisture-density relationship tests, ASTM Test Method D698, on each sample. The permeability tests were conducted in triaxial compressive strength tests chambers with a constant head. The permeability test samples were remolded to about 95 percent relative compaction at/or near optimum moisture content based on the moisture-density relationship test results. The results of the moisture-density tests and the permeability tests are attached. The test results were discussed with Mr. Larry Perino on August 19, 1988.

If you have any questions concerning the test results or if we may be of further assistance please contact us.

Respectfully submitted,

LAMBERT AND ASSOCIATES



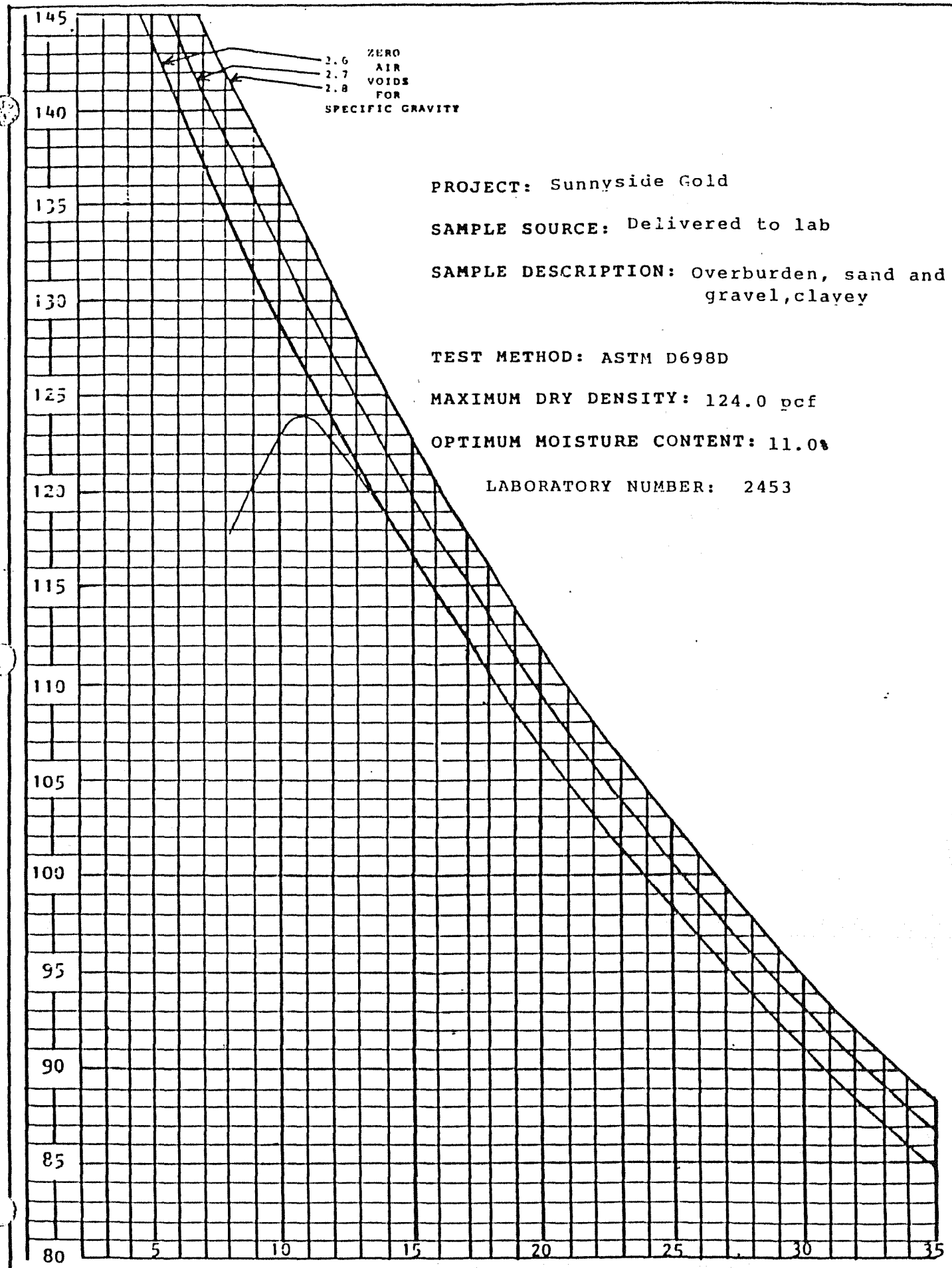
Norman W. Johnston, P.E.

attachments  
NWJ/nr

P.O. BOX 3986  
GRAND JUNCTION, CO 81502  
(303) 245-6506

P.O. BOX 0045  
MONTROSE, CO 81402  
(303) 249-2154

463 TURNER, 104 A  
DURANGO, CO 81301  
(303) 259-5095



PROJECT: Sunnyside Gold

SAMPLE SOURCE: Delivered to lab

SAMPLE DESCRIPTION: Overburden, sand and gravel, clayey

TEST METHOD: ASTM D698D

MAXIMUM DRY DENSITY: 124.0 pcf

OPTIMUM MOISTURE CONTENT: 11.0%

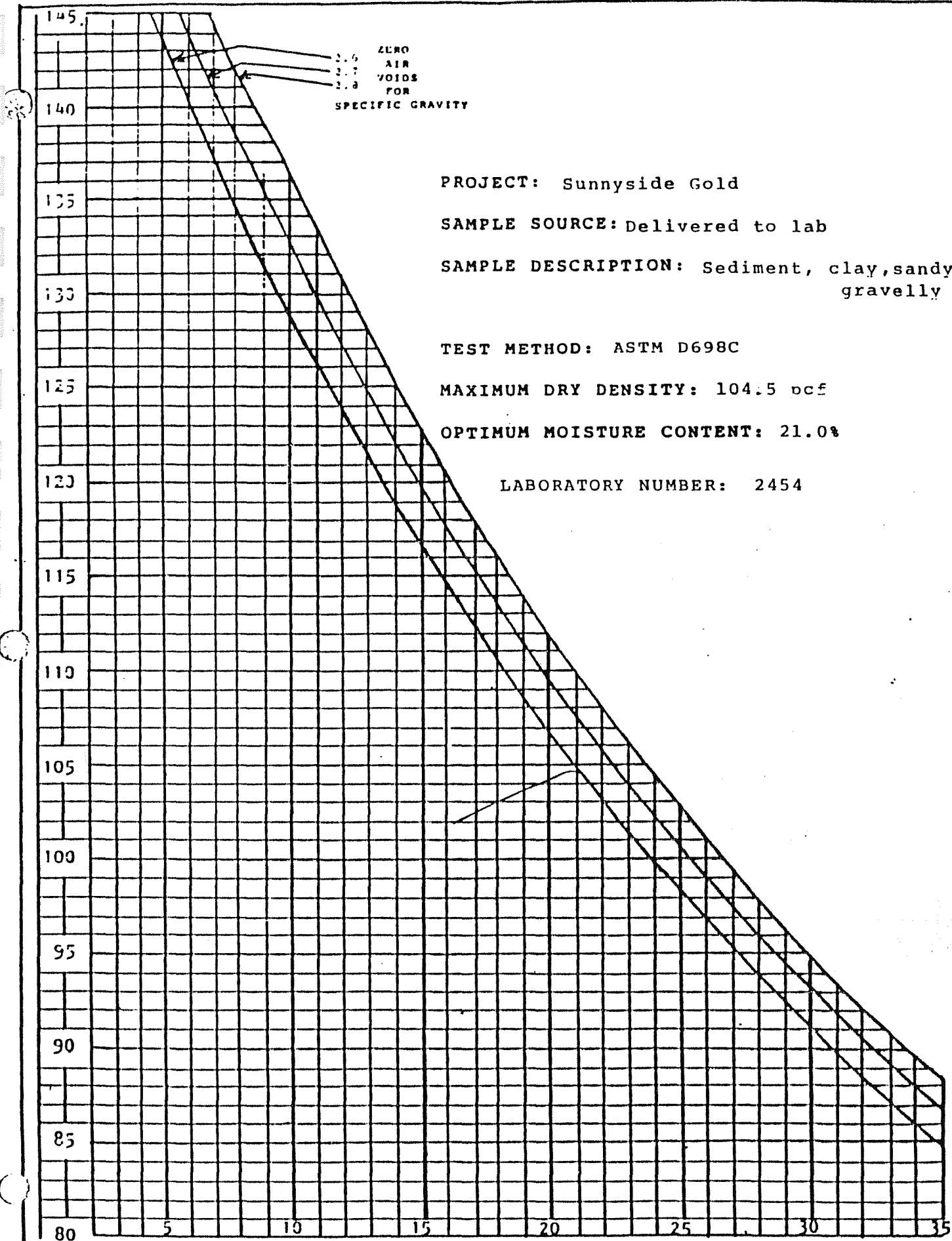
LABORATORY NUMBER: 2453

**Lambert and Associates**

Project No.: M00052MT

Date:

Figure:



**Lambert and Associates**

Project No. M88052MT

Date:

Figure:

PERMEABILITY TEST RESULTS

Date: 8/15/88

Sample NO. 2453

Sample Description: Overburden-Sand and gravel, clayey

Permeability:  $1.6 \times 10^{-7}$  cm/sec

Date: 8/15/88

Sample NO. 2454

Sample Description: Sediment-Clay, sandy and gravelly

Permeability:  $6.7 \times 10^{-9}$  cm/sec

**Lambert and Associates**

Project No.:

Date:

Figure:



# Lambert and Associates

CONSULTING GEOTECHNICAL ENGINEERS AND MATERIAL TESTING

## TEST RESULTS

PROJECT Sunnyside Gold PROJECT NO. M88052MT DATE 8/10/8  
LOCATION Silverton, CO SOURCE Delivered to lab  
SAMPLE NO. 2453 & 2454 SPECIFICATION\*

### AFTER PERMEABILITY MOISTURE CONTENT

Sample Number: 2453

Moisture Content: 24.4%

Sand and gravel, clayey

Sample Number: 2454:

Moisture Content: 25.2%

Sand and gravel, clayey

## **APPENDIX C**

### **Tables of Flow and Water Chemistry from the Sunnyside Mine**

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C - 1

 **simon** HYDRO-SEARCH

**American Tunnel Discharge  
(Before Treatment)**

TABLE 1

San Juan County Mining Ventura-Sunnyside Mine/Mayflower Mill

Water Data Summary

Site: ATINFL\*

Date Available thru:

08-Jul-91

Mean	2.273	6.4	5.4	10.5	1287	1870	1793	183	12	26	142	0.29	0.00	0.13	ERR	5.30
MAX	2.290	9.1	8.5	14.9	1750	2120	2230	1470	12	26	142	0.29	0.00	0.13	ERR	5.30
MIN	2.240	5.7	4.1	5.0	1000	1650	132	31	12	26	142	0.29	0.00	0.13	ERR	5.30

Station	Sampledate	lab	Qmgd	FieldpH	labpH	FieldT	C	uS	uS	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
ATINFL	16-Mar-87	SGC																	
ATINFL	31-Mar-87	SGC			6.43					1664	43.2								
ATINFL	02-Apr-87	SGC								1593									
ATINFL	16-Apr-87	SGC		6.3	6.46	10.9		1863		1658	49								
ATINFL	24-Apr-87	SGC		6.38	6.67	11.3		1700		1719	41.5								
ATINFL	28-Apr-87	SGC		6.07	6.68	11.6		1931		1718	90.5								
ATINFL	08-May-87	R&N		6.29	5.87	12.5		1897		1785	140.5								
ATINFL	15-May-87	R&N		6.23	5.92	13	1500			1970	120.5								
ATINFL	22-May-87	R&N		6.33	5.93	12.7	1220	1908		1780	69.2								
ATINFL	29-May-87	R&N		6.07	6.19	12	1400	1864		955	35.46								
ATINFL	10-Jun-87	IML		6.09	4.80	12.7	1400			1880	102								
ATINFL	16-Jun-87	IML		5.83	5.52	13.3	1390			1920	128								
ATINFL	23-Jun-87	IML		6	4.90	12.6	1450			1930	87								
ATINFL	30-Jun-87	IML		5.97	5.50	13.2	1450			1930	194								
ATINFL	07-Jul-87	IML		5.68	5.30	13.3	1550			1950	180								
ATINFL	24-Jul-87	IML		6.21	4.60	14.5	1400			2230	106								
ATINFL	15-Jul-87	IML		6.21	4.80	14	1300			1880	177								
ATINFL	30-Jul-87	IML		6.15	4.60	14	1000			1890	162								
ATINFL	06-Aug-87	IML		6.38	5.60	14.9	1380			1930	112								
ATINFL	11-Aug-87	IML		6.32	4.80	13.8	1400			1860	72								
ATINFL	18-Aug-87	IML		6.38	5.40	12.5				1910	82								
ATINFL	27-Aug-87	IML		6.19	4.90	11.8	1350			1890	180								
ATINFL	02-Sep-87	IML		6.2	4.30	10	1250	1860		1860	102								
ATINFL	12-Sep-87	IML		6.32	4.10	12	1250	1960		1830	148								
ATINFL	17-Sep-87	IML		6.3	4.60	11	1300	1950		1870	102								
ATINFL	01-Oct-87	IML		6.42	4.80	13.5				1880	142								
ATINFL	07-Oct-87	IML		6.33	4.70	12				1930	108								

Station	Sampledate	lab	Qmgd	FieldpH	labpH	FieldT	FieldCond	labcond	TDS(180)	TSS	Hard	Eff	TA	kCa	COAc	CaCo3	NO3&NO2	NO2	NH3-N	Cyanide	Fl
ATINFL	16-Oct-87	IML		6.13	4.80	9			2120	1880	94										
ATINFL	23-Oct-87	IML		6.23	5.10	9			1950	1910	140										
ATINFL	30-Oct-87	IML		6.17	4.20	9.5			1880	1850	111										
ATINFL	13-Oct-87	IML		6.06		9.5															
ATINFL	21-Oct-87	IML		6.2		8.5															
ATINFL	27-Oct-87	IML		6.18		8.5															
ATINFL	06-Nov-87	IML		6.17	5.10	9.5			1890	1870	92										
ATINFL	13-Nov-87	IML		6.16	4.70	8.5			1750	1880	114										
ATINFL	22-Nov-87	IML		6.22	5.40	5			1720	1830	102										
ATINFL	27-Nov-87	IML		6.41	5.30	8			1650	1880	58										
ATINFL	04-Dec-87	IML		6.38		10															
ATINFL	03-Nov-87	IML		6.2		11															
ATINFL	11-Nov-87	IML		6.31		9.5															
ATINFL	17-Nov-87	IML		6.37		8.5															
ATINFL	04-Dec-87	IML		6.38	4.20	10			1840	1920	88										
ATINFL	11-Dec-87	IML		6.3	5.60	8.5	1200		1840	1920	66										
ATINFL	18-Dec-87	IML		6.21	5.40	8			1890	1880	124										
ATINFL	22-Dec-87	IML		6.38	4.50	9	1100		1840	1850	112										
ATINFL	31-Dec-87	IML		6.34	4.60	7			1840	1870	98										
ATINFL	02-Dec-87	IML		6.3		9															
ATINFL	09-Dec-87	IML		6.66		9															
ATINFL	16-Dec-87	IML		6.29		8															
ATINFL	13-Jan-88	IML		6.54	4.90	10			1910	104											
ATINFL	22-Jan-88	IML		6.33	5.60				1890	100											
ATINFL	29-Jan-88	IML		6.32	5.00				1850	160											
ATINFL	02-Feb-88	IML		6.22	5.90				1850	77											
ATINFL	05-Jan-88	IML		6.47		10															
ATINFL	26-Jan-88	IML		6.55																	
ATINFL	11-Feb-88	IML		6.25	4.50	9.5			1910	192											
ATINFL	29-Feb-88	IML		6.55	5.9	10.5			1850	299											
ATINFL	10-Mar-88	IML		6.23	5.3	9	1100		1900	117											
ATINFL	22-Mar-88	IML		6.19	5.1	9.5			1890	176											
ATINFL	30-Mar-88	IML		6.3	4.9	8.5	1000		1910	277											
ATINFL	31-Mar-88	IML		6.59	5.2	9.5	1050		1890	416											
ATINFL	08-Apr-88	IML		6.45	6.2	11	1410		1900	880											
ATINFL	15-Apr-88	IML		6.22	4.9	5	1190		1870	248											

Station	Sampledate	lab	Qmgd	FieldpH	labpH	FieldT	FieldCond	labcond	TDS(180)	TSS	Hard	Eff	TA	kCa	COAc	CaCo3	NO3&NO2	NO2	NH3-N	Cyanide	Fl
ATINFL	21-Apr-88	IML		6.24	5.7	9	1300		1880	170											
ATINFL	06-May-88	IML		6.28	5.70	8	1100		1900	316											
ATINFL	11-May-88	IML		6.52	5.3	11			1880	244											
ATINFL	16-May-88	IML		6.42	5.50	11			1920	358											
ATINFL	27-May-88	IML		6.4	4.90	10.5			1890	180											
ATINFL	13-May-88	IML		6.27		12															
ATINFL	24-May-88	IML		6.2		10															
ATINFL	31-May-88	IML		6.24		8.5															
ATINFL	03-Jun-88	IML		6.24	5.70	10.5			1910	128											
ATINFL	13-Jun-88	IML		6.22	5.70	10.5			1910	231											
ATINFL	20-Jun-88	IML		6.3		11															
ATINFL	21-Jun-88	IML		6.21		14															
ATINFL	24-Jun-88	IML		6.01	5.00	13			2010	902											
ATINFL	29-Jun-88	IML		6.15	5.20	12.5			1970	142											
ATINFL	15-Jul-88	IML		6.17	5.10	12			1990	372											
ATINFL	21-Jul-88	IML		6.53	5.50	12.5			1930	134											
ATINFL	29-Jul-88	IML		6.13	5.8	12			1970	101											
ATINFL	04-Aug-88	IML		6.21	5.30	11			1900	117											
ATINFL	10-Aug-88	NA		6.17																	
ATINFL	12-Aug-88	IML		6.4	5.50	13			1920	1470											
ATINFL	16-Aug-88	IML		6.29	6.00	11			1940	103											
ATINFL	18-Aug-88	NA		6.31		11															
ATINFL	27-Aug-88	IML		6.3	5.10	12			850	82											
ATINFL	31-Aug-88	NA		6.33		11															
ATINFL	01-Sep-88	IML		6.61	5.40	11			132	186											
ATINFL	07-Sep-88	IML		6.45	4.60	8.5			1920	512											
ATINFL	09-Sep-88	NA		6.2																	
ATINFL	14-Sep-88	IML		6.42	5.70	7			208	124											
ATINFL	23-Sep-88	NA		6.55		10															
ATINFL	23-Sep-88	IML		6.4	5.50	9			1890	75											
ATINFL	26-Sep-88	IML		6.4	6.00	9			1890	90											
ATINFL	29-Sep-88	NA		6.49		11															
ATINFL	06-Oct-88	NA		6.2		8															
ATINFL	04-Oct-88	IML		6.48	5.20	10			1840	200											
ATINFL	12-Oct-88	IML		6.52	4.80	10			1830	118											
ATINFL	14-Oct-88	NA		6.3		11.5															

Station	Sampledate	lab	Qmgd	FieldpH	labpH	FieldT	FieldCond	labcond	TDS(180)	TSS	Hard	Eff	TA	kCa	CD	AcCa	Co3	NO3&NO2	NO2	NH3-N	Cyanide	Fl
ATINFL	18-Oct-88	IML		6.01	5	13.5			1860	188												
ATINFL	20-Oct-88	NA		6.04		10																
ATINFL	28-Oct-88	IML		6.17	5.10	9			1840	98												
ATINFL	02-Nov-88	NA		6.24		10																
ATINFL	04-Nov-88	IML		6.58	5.70				1780	148												
ATINFL	08-Nov-88	IML		6.33	5.7	9			1840	99												
ATINFL	11-Nov-88	NA		6.03		9																
ATINFL	15-Nov-88	NA		6.14		7.5																
ATINFLA	18-Nov-88	IML		6.18	5.00	9			1880	138												
ATINFLB	18-Nov-88	RN	2.28	9.12																		
ATINFLB	18-Nov-88	RN	2.28	9.12																		
ATINFL	22-Nov-88	IML		6.61	5.40	9			1880	98												
ATINFL	23-Nov-88	NA		6.64		10																
ATINFL	30-Nov-88	IML		6.71	5.9	10			1910	1420												
ATINFL	05-Dec-88	NA		6.6		9.5																
ATINFLA	06-Dec-88	IML		6.54	5.30	9.5			1820	145												
ATINFLB	06-Dec-88	CDS		6.54	5.73					71												
ATINFLC	06-Dec-88	RN		6.54	6.48					110												
ATINFLD	06-Dec-88	RN		6.54																		
ATINFLA	13-Dec-88	IML		6.3	5.80	10			1840	134												
ATINFLB	13-Dec-88	RN		6.3	6.34					84.2												
ATINFLC	13-Dec-88	CDS		6.3	5.54					1290												
ATINFLA	19-Dec-88	IML		6.57	5.9	9			1840	92												
ATINFLB	19-Dec-88	RN		6.57	6.22					35.6												
ATINFLC	19-Dec-88	CDS		6.57	5.54					93												
ATINFL	21-Feb-89	IML		6.58	5.28	10			1858	268												
ATINFL	12-Apr-89	IML		6	5.7	8	1300		1636	139												
ATINFL	11-May-89	IML		6.66	5.8	12			1784	31												
ATINFL	12-Jun-89	IML		6.33	4.77	13	1300		134	42												
ATINFL	18-Jul-89	IML		6.51	5.93	12	1500		1892	132												
ATINFL	28-Aug-89	IML		6.33	5.42	14	1750		1844	86												

Station	Sampldate	lab	Qmgd	FieldpH	labpH	FieldT	FieldCond	labcond	TDS(190)	TSS	Hard	Eff	TA	Ca	CO <sub>3</sub>	CaCO <sub>3</sub>	NO <sub>3</sub> &NO <sub>2</sub>	NO <sub>2</sub>	NH <sub>3</sub> -N	Cyanide	Fl
ATINFL	25-Sep-89	IML			5.53	11	1090		1858	84											
ATINFL	27-Oct-89	IML		6.64	6.14	12			1848	70											
ATINFL	30-Nov-89	IML		6.69	6.04	10	1400		1798	108											
ATINFL	29-Dec-89	IML		6.79	5.8	10			1850	82											
ATINFL	09-Jan-90	IML		6.72	5.42	10.0	1050		1878	90											
ATINFL	27-Feb-90	IML		6.53	5.36	11.0	1100		1866	72											
ATINFL	26-Mar-90	IML		6.2	5.8	11.0	1100		1874	108											
ATINFL	22-May-90	IML		6.34	5.82	12.0			1838	88											
ATINFL	25-Jun-90	IML		6.15	4.8	13.0			2002	108											
ATINFLA	10-Jul-90	IML		6.26																	
ATINFLB	10-Jul-90	AEZ		6.26																	
ATINFL	31-Jul-90	IML		6.59	5.35	12.0			1958	131											
ATINFL	27-Aug-90	IML		6.53	5.67	13.0			1960	96											
ATINFL	10-Sep-90	IML		6.49	8.52	12.0			1914	126											
ATINFL	25-Sep-90	RN		6.44		12															
ATINFL	23-Oct-90	IML		5.85	5.48				1890	78											
ATINFL	06-Nov-90	IML		6.61	5.98	7			860	446											
ATINFL	28-Nov-90	IML		6.23	5.19	8			1920	142											
ATINFL	15-Mar-91	IML		6.6	6.3	8.5			1910	80											
ATINFL	01-Apr-91		2.290																		
ATINFL	01-Apr-91		2.240																		
ATINFL	31-May-91	IML		6.3	5.6	10	1930	1234	113	12.4	25.9	142	0.29	<.04	0.13					5.3	
ATINFL	10-Jun-91	IML		6.4		10															



TABLE 2

San Juan County Mining Venture-Sunnyside Mine/Mayflower Mill

Water Data Summary METALS

Date Available thru: Site: ATINFL\*

08-Jul-91

Mean	0.00	0.70	0.00	0.00	0.042	0.044	0.33	0.17	ERR	0.00	38.66	16.54	1.15	0.01	0.000	0.000	24.98	22.91	0.00	5.98	15.05	15.26
MAX	0.00	0.70	0.00	0.00	0.355	0.063	4.48	0.81	ERR	0.00	78.40	19.70	13.60	0.03	0.001	0.000	30.00	24.90	0.00	5.98	45.40	21.50
MIN	0.00	0.70	0.00	0.00	0.000	0.001	0.04	0.01	ERR	0.00	18.81	13.37	0.00	0.00	0.000	0.000	19.37	20.91	0.00	5.98	0.65	8.35

Station	Sample Date	mg/l dAg	mg/l dAl	mg/l dTAs	mg/l dAu	mg/l TCadmium	mg/l dCd	mg/l TCopper	mg/l dCu	mg/l TCr	mg/l dCr	mg/l TFe3	mg/l dFe3	mg/l TLead	mg/l dPb	mg/l THg	mg/l TMn	mg/l dMn	mg/l dSe	mg/l dSr	mg/l TZinc	mg/l dZn
ATINFL	16-Mar-87														0.0004							
ATINFL	31-Mar-87					0.031		0.04				26.5		0.17		0.0009					9.88	
ATINFL	02-Apr-87														0.0003							
ATINFL	16-Apr-87					0.044		0.08				18.81		0.26		0.0003					9.46	
ATINFL	24-Apr-87					0.038		0.07				38.6		1.72		0.0005					10.18	
ATINFL	28-Apr-87					0.042		0.07				46.7		0.35		0.0002					8.89	
ATINFL	08-May-87					0.03		0.09						1.7		0.0003					10.05	
ATINFL	15-May-87					0.06		0.11						0.83		0.0004					19.37	
ATINFL	22-May-87					0.036		0.08						0.68		0.0002					12.59	
ATINFL	29-May-87					0.032		0.08						0.6		0.0003					12.9	
ATINFL	10-Jun-87					0.004		0.17						0.006		<.001					12.5	
ATINFL	16-Jun-87					0.061		0.51						<.02		<.001					18.6	
ATINFL	23-Jun-87					0.003		0.34						0.04		<.001					19.4	
ATINFL	30-Jun-87					0.066		0.7						1.52		<.001					20.1	
ATINFL	07-Jul-87					0.08		0.75						1.34		<.001					22.95	
ATINFL	24-Jul-87					0.049		0.25						0.49		<.001					13.76	
ATINFL	15-Jul-87					0.076		0.59						1.73		<.001					18	
ATINFL	30-Jul-87					0.046		0.21						0.13		<.001					15.2	
ATINFL	06-Aug-87					0.04		0.35						1.22		<.001					15.3	
ATINFL	11-Aug-87					0.04		0.17						0.37		<.001					13.2	
ATINFL	18-Aug-87					0.032		0.16						0.2		<.001					13.3	
ATINFL	27-Aug-87					0.047		0.25						1.3		<.001					14.58	
ATINFL	02-Sep-87					0.042		0.12						0.59		<.001					14	
ATINFL	12-Sep-87					0.045		0.14						1.21		<.001					14.3	
ATINFL	17-Sep-87					0.048		0.12						0.7		<.001					14.8	
ATINFL	01-Oct-87					0.044		0.19						1.76		<.001					14.6	
ATINFL	07-Oct-87					0.042		0.2						0.59		<.001					15.4	

Station	Sample	Date	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
			dAg	dAl	dTAs	dAu	TCadmium	dCd	TCopper	dCu	TCr	dCr	TFe3	dFe3	TLead	dPb	THg	TMn	dMn	dSe	dSr	TZinc	dZn
ATINFL	16-Oct-87						0.038		0.2						0.5	<.001						12.15	
ATINFL	23-Oct-87						0.042		0.22						0.85	<.001						14.06	
ATINFL	30-Oct-87						0.038		0.12						0.89	<.001						13.6	
ATINFL	13-Oct-87																						
ATINFL	21-Oct-87																						
ATINFL	27-Oct-87																						
ATINFL	06-Nov-87						0.039		0.08						0.47	<.001						13.4	
ATINFL	13-Nov-87						0.04		0.15						0.48	<.001						13.58	
ATINFL	22-Nov-87						0.04		0.09						0.31	<.001						13.14	
ATINFL	27-Nov-87						0.05		0.09						0.28	<.001						13.38	
ATINFL	04-Dec-87																						
ATINFL	03-Nov-87																						
ATINFL	11-Nov-87																						
ATINFL	17-Nov-87																						
ATINFL	04-Dec-87						0.009		0.12						<.02	<.001						13.2	
ATINFL	11-Dec-87						0.002		0.1						<.02	<.001						13	
ATINFL	18-Dec-87						0.083		0.09						<.02	<.001						12.8	
ATINFL	22-Dec-87						0.026		0.08						<.02	<.001						13.5	
ATINFL	31-Dec-87						0.011		0.05						0.06	<.001						13.8	
ATINFL	02-Dec-87																						
ATINFL	09-Dec-87																						
ATINFL	16-Dec-87																						
ATINFL	13-Jan-88						0.02		0.07						0.24	<.001						12.4	
ATINFL	22-Jan-88						0.008		0.06						0.16	<.001						12.9	
ATINFL	29-Jan-88						0.009		0.13						0.14	<.001						12.7	
ATINFL	02-Feb-88						0.009		0.06						<.02	<.001						12.2	
ATINFL	05-Jan-88																						
ATINFL	26-Jan-88																						
ATINFL	11-Feb-88						0.047		0.19						0.07	.001						14.7	
ATINFL	29-Feb-88						0.017		0.12						0.6	<.001						12.9	
ATINFL	10-Mar-88						0.015		0.16						0.04	<.001						13	
ATINFL	22-Mar-88						0.017		0.190						0.25	<.001						13.5	
ATINFL	30-Mar-88						0.015		0.13						0.32	<.001						13	
ATINFL	31-Mar-88						0.004		0.28						0.57	<.001						15.7	
ATINFL	08-Apr-88						0.065		0.55						1.21	<.001						20.3	
ATINFL	15-Apr-88						0.015		0.17						0.11	<.001						13.6	

Station	Sample date	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
		dAg	dAl	dTAs	dAu	TCadmium	dCd	TCopper	dCu	TCr	dCr	TFe3	dFe3	TLead	dPb	TMercury	dHg	TMn	dMn	dSe	dSr	TZinc	dZn
ATINFL	21-Apr-88					0.015		0.07						0.08		<.001						13.5	
ATINFL	06-May-88					0.033		0.2						0.44		<.001						14.3	
ATINFL	11-May-88					0.027		0.23						0.47		<.001						13.4	
ATINFL	16-May-88					0.134		2.32						9.06		<.001						26.7	
ATINFL	27-May-88					0.026		0.32						2.79		<.001						15.1	
ATINFL	13-May-88																						
ATINFL	24-May-88																						
ATINFL	31-May-88																						
ATINFL	03-Jun-88					0.052		0.41						2.58		<.001						16.9	
ATINFL	13-Jun-88					0.059		0.63						3.02		<.001						20.9	
ATINFL	20-Jun-88																						
ATINFL	21-Jun-88																						
ATINFL	24-Jun-88					0.061		2.03						8.11		<.001						34.2	
ATINFL	29-Jun-88					0.035		0.66						1.06		<.001						22.5	
ATINFL	15-Jul-88					0.040		0.8						3.52		<.001						43.3	
ATINFL	21-Jul-88					0.050		0.54						2.11		<.001						19.9	
ATINFL	29-Jul-88					0.046		0.2						0.3		<.001						11.8	
ATINFL	04-Aug-88					0.023		0.21						0.23		<.001						14.5	
ATINFL	10-Aug-88																						
ATINFL	12-Aug-88					0.027		0.34						1.56		<.001						8.24	
ATINFL	16-Aug-88					0.029		0.22						0.33		<.001						13.2	
ATINFL	18-Aug-88																						
ATINFL	27-Aug-88					0.032		0.12						0.07		<.001						12.3	
ATINFL	31-Aug-88																						
ATINFL	01-Sep-88					0.044		0.15						0.19		<.001						11.9	
ATINFL	07-Sep-88					0.276		1.38						0.62		<.001						39.2	
ATINFL	09-Sep-88																						
ATINFL	14-Sep-88					0.029		0.22						0.7		<.001						13.4	
ATINFL	23-Sep-88																						
ATINFL	23-Sep-88					0.039		0.17						0.25		<.001						11.8	
ATINFL	26-Sep-88					0.014		0.15						0.25		<.001						11.1	
ATINFL	29-Sep-88																						
ATINFL	06-Oct-88																						
ATINFL	04-Oct-88					0.040		0.18						1.03		<.001						14.4	
ATINFL	12-Oct-88					0.047		0.12						0.58		<.001						10.5	
ATINFL	14-Oct-88																						

Station	Sample	date	mg/l dAg	mg/l dAl	mg/l dTAs	mg/l dAu	mg/l TCadmium	mg/l dCd	mg/l TCopper	mg/l dCu	mg/l TCr	mg/l dCr	mg/l TFe3	mg/l dFe3	mg/l TLead	mg/l dPb	mg/l THg	mg/l TMn	mg/l dMn	mg/l dSe	mg/l dSr	mg/l TZinc	mg/l dZn
ATINFL	18-Oct-88						0.030		0.27						1.1		<.001					22.8	
ATINFL	20-Oct-88																						
ATINFL	28-Oct-88						0.055		0.3						0.49		<.001					16	
ATINFL	02-Nov-88																						
ATINFL	04-Nov-88						0.028		0.14						0.97		<0.001					8.68	
ATINFL	08-Nov-88						0.044		0.19						0.99		<.001					8.9	
ATINFL	11-Nov-88																						
ATINFL	16-Nov-88																						
ATINFLA18	Nov-88						0.042		0.29						1.92		<0.001					11.4	
ATINFLB18	Nov-88						0.046		0.21						3.07		<0.001					14.27	
ATINFLB18	Nov-88						0.044		0.26						2.5		<0.001					13.47	
ATINFL	22-Nov-88						0.035		0.15						1.03		<0.001					10.4	
ATINFL	23-Nov-88																						
ATINFL	30-Nov-88						0.090		4.48						13.6		<.001					45.4	
ATINFL	05-Dec-88																						
ATINFLA06	Dec-88						0.041		0.14						0.84		<.001					12.5	
ATINFLB06	Dec-88																					12.7	
ATINFLC06	Dec-88						0.033		0.09						1.93							10.31	
ATINFLD06	Dec-88																					11.45	
ATINFLA13	Dec-88						0.035		0.31						0.63		<.001					12.9	
ATINFLB13	Dec-88						0.042		0.11						1.05							11.18	
ATINFLC13	Dec-88																					12.2	
ATINFLA19	Dec-88						0.024		0.12						0.17		<.001					8.21	
ATINFLB19	Dec-88						0.032		0.08						0.54							0.65	
ATINFLC19	Dec-88																					10.8	
ATINFL	21-Feb-89						0.015		0.340						1.606		<.001					14.11	
ATINFL	12-Apr-89						0.04		0.620						1.540		<.001					14.89	
ATINFL	11-May-89						<.002		0.12						0.71		<.01					10.7	
ATINFL	12-Jun-89						0.110		0.960						1.24		<.001					18.84	
ATINFL	18-Jul-89						0.043		0.390						1.42		<.001					15.62	
ATINFL	28-Aug-89						0.019		0.14						0.04		<.001					12.88	

Station	Sample	date	mg/l dAg	mg/l dAl	mg/l dTAs	mg/l dAu	mg/l TCadmium	mg/l dCd	mg/l TCopper	mg/l dCu	mg/l TCr	mg/l dCr	mg/l TFe3	mg/l dFe3	mg/l TLead	mg/l dPb	mg/l TMercury	mg/l dHg	mg/l TMn	mg/l dMn	mg/l dSe	mg/l dSr	mg/l TZinc	mg/l dZn
ATINFL	25-Sep-89						0.008		0.210						0.275		<.001						4.48	
ATINFL	27-Oct-89						0.02		0.13						0.02								11.12	
ATINFL	30-Nov-89						0.031		0.19						0.86		<.0002						12.33	
ATINFL	29-Dec-89						0.026		0.17						0.711		<.0002						11.63	
ATINFL	09-Jan-90						0.0390		0.190						1.012		<.0002						10.98	
ATINFL	27-Feb-90						0.0213		0.090	0.03					0.069	<.004	<.002						10.02	8.35
ATINFL	26-Mar-90						0.0276		0.260						4.270		<.0002						13.1	
ATINFL	22-May-90						0.0932		0.130						1.920								42	
ATINFL	25-Jun-90						0.0550	0.0616	0.810	0.81					1.105	0.028	<.0002	<.0002					24.2	20.5
ATINFLA	10-Jul-90				<.05		0.3550	0.0630	0.89	0.12					1.550	0.006	<.0002	<.0002					22.9	21.5
ATINFLB	10-Jul-90				0.002		0.0600		0.110						<.02								19	
ATINFL	31-Jul-90						0.0409		0.520						3.140		<.0002						14.3	
ATINFL	27-Aug-90						0.0230		0.340						0.513		<.002						13.8	
ATINFL	10-Sep-90						0.0130	0.0010	0.320	0.03					0.975	<.005	<.002	<.001					11.7	11.6
ATINFL	25-Sep-90												26.04						21.95					
ATINFL	23-Oct-90						0.0500		0.31						0.42		<.0002						16	
ATINFL	06-Nov-90						0.0718		0.69				78.4		4.41		<.001		30				22.2	
ATINFL	28-Nov-90						0.0267	0.0373	0.42	0.01			40.4	19.7	1.54	0.022	<.0002	<.0002	28.6	24.9			17.1	16.8
ATINFL	15-Mar-91						0.016		0.197						0.99		<.0002						12.50	
ATINFL	01-Apr-91																							
ATINFL	01-Apr-91																							
ATINFL	31-May-91	<.01	0.7	<.002	<.05	0.015	0.056	0.488	0.01			<.02	33.8	13.37	1.11	<.005	<.001	<.0002	19.37	20.91	<.002	5.98	12.89	12.78
ATINFL	10-Jun-91																							

TABLE 3

San Juan County Mining Venture-Sunnyside Mine/Mayflower Mill

Water Data Summary CAT/AN BAL

Date Available thru: Site: ATINFL\*

08-Jul-91

Mean	0	0	1	1310	448	30	1	7
MAX	0	0	1	1310	448	30	1	7
MIN	0	0	1	1310	448	30	1	7

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mg/l  mg/l  mg/l  mg/l  mg/l  mg/l  mg/l  mg/l  %
StationSampledate bicarHCO  CO3 ChlorideSulfate  Ca  Mg  K  Na cat/andiff
ATINFL 25-Sep-89
ATINFL 27-Oct-89
ATINFL 30-Nov-89
ATINFL 29-Dec-89
ATINFL 09-Jan-90
ATINFL 27-Feb-90
ATINFL 26-Mar-90
ATINFL 22-May-90
ATINFL 25-Jun-90
ATINFLA10-Jul-90
ATINFLB10-Jul-90
ATINFL 31-Jul-90
ATINFL 27-Aug-90
ATINFL 10-Sep-90
ATINFL 25-Sep-90
ATINFL 23-Oct-90
ATINFL 06-Nov-90
ATINFL 28-Nov-90
ATINFL 15-Mar-91
ATINFL 01-Apr-91
ATINFL 01-Apr-91
ATINFL 31-May-91  0  0  1.17  1310  448  29.8  0.75  6.9  0.11
ATINFL 10-Jun-91

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**Terry Tunnel Discharge  
(Before Treatment)**

TABLE 1

San Juan County Mining Venture-Sunnyside Mine/Mayflower Mill

Water Data Summary

Site: TTINFL\*

Date Available thru:

08-Jul-91

Mean	5.9	5.7	7.0	435	687	751	704	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
MAX	6.8	6.8	11.0	910	868	1900	4600	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
MIN	3.8	0.6	4.0	220	506	362	8	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR

Station	Sampledate	lab	Qeqd	FieldpH	labpH	FieldT	FieldCond	labcond	TDS(180)	TSS	Hard	Eff	TA	Ca	COAc	CaCo3	NO3&NO2	NO2	NH3-N	Cyanide	Fl
TTINFL	05-Jun-87	R&N		5.69	6.04	6.2	342	506	370	278.6											
TTINFL	10-Jun-87	IML		5.53	6.50	6	320		394	1540											
TTINFL	16-Jun-87	IML		6.01	6.33	5.5	295		378	234											
TTINFL	25-Jun-87	IML		6.17	6.30	5.5	220		362	734											
TTINFL	01-Jul-87	IML		5.72	6.30	7.1	325		406	1220											
TTINFL	07-Jul-87	IML		5.98	6.40	7.5	315		366	678											
TTINFL	15-Jul-87	IML		6.43	6.40	8.5	330			4600											
TTINFL	24-Jul-87	IML		6.68	6.30	7	360		644	1760											
TTINFL	30-Jul-87	IML		6.16	6.20	6	375		420	190											
TTINFL	06-Aug-87	IML		6.19	6.20	5.5	315		506	200											
TTINFL	11-Aug-87	IML		6.04	6.70	5.2	360		498	120											
TTINFL	18-Aug-87	IML		6.45	6.30	7	550		748	86											
TTINFL	27-Aug-87	IML		6.15		6	515														
TTINFL	05-Sep-87	IML		6.1	6.20	6	520	868	732	62											
TTINFL	13-Apr-88	IML			5.9	8.5			1480	7.6											
TTINFL	27-May-88	IML		6.35	5.60	5			530	456											
TTINFL	03-Jun-88	IML		5.85	6.50	5			572	155											
TTINFL	13-Jun-88	IML		6.09	6.70	4			416	816											
TTINFL	24-Jun-88	IML		6.35	6.40	6			432	1780											
TTINFL	30-Jun-88	IML		5.98	6.30	5			452	972											
TTINFL	15-Jul-88	IML		6.03	6.00	9			656	284											
TTINFL	22-Jul-88	IML		5.87	5.60	5.5			660	210											
TTINFL	29-Jul-88	NA		6.36		9															
TTINFL	06-Aug-88	IML		6.78	5.90	7			732	2660											
TTINFL	12-Aug-88	IML		6.3	0.56	9			974	1980											
TTINFL	18-Aug-88	IML		5.92	6.10	11			896	116											
TTINFL	27-Aug-88	IML		6.05	5.60	10			1050	1420											



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Station  Sampldate  lab  Qmgd  FieldpH  labpH  FieldT  FieldCond  labcond  TDS(180)  TSS  Hard  Eff  TA  lCaCO3  CaCO3  NO3&NO2  NO2  NH3-N  Cyanide  FI
TTINFL  01-Sep-88  IML          6.75    6.20    6          1900  2420
TTINFL  07-Sep-88  IML          6.4     2.10    6          852   80
TTINFL  15-Sep-88  IML          6.09    6.60    5.5        1850  1370
TTINFL  23-Sep-88  IML          6.69    5.40          778   195
TTINFL  26-Sep-88  IML          6.82    6.00    6          716   78
TTINFL  05-Oct-88  NA
TTINFL  12-Oct-88  IML          5.23    4.10    4          1110  8.4
TTINFL  26-May-89  IML          6.83    6.4          434   89
TTINFL  07-Jun-89  IML          6.31    5.64    9          498   85
TTINFL  13-Jul-89  IML          6.45    6.51    7.5        410   606  393
TTINFL  29-Aug-89  IML          4.92    4.69    9          910   1166  17
TTINFL  26-Sep-89  IML          4.53    4.48    8          690   1118  37
TTINFL  26-Oct-89  IML          5.16    4.81    5          680   916   15
TTINFL  27-Jun-90  IML          6.36    6.75    5.0        632   139
TTINFL  30-Jul-90  IML          5.9     5.4     5.0        908   157
TTINFL  30-Aug-90  IML          6.23          9.0
TTINFL  12-Sep-90  IML          5.99    5.22    9.0        1128  524
TTINFL  06-Jun-91          4.5
TTINFL  11-Jun-91  IML          5.6          10
TTINFL  17-Jun-91  IML          4.4          9.9
TTINFL  18-Jun-91          4.1
TTINFL  20-Jun-91          5.2
TTINFL  24-Jun-91          4.2          9
TTINFL  01-Jul-91          3.8          8.6

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TABLE 2

San Juan County Mining Venture-Sunnyside Mine/Mayflower Mill

Water Data Summary METALS

Date Available thru: Site: TTINFL\*

08-Jul-91

Mean	ERR	ERR	ERR	ERR	0.138	0.201	2.63	0.92	ERR	ERR	ERR	ERR	4.81	0.51	0.000	0.000	ERR	ERR	ERR	ERR	32.69	40.90
MAX	ERR	ERR	ERR	ERR	0.397	0.289	29.00	1.30	ERR	ERR	ERR	ERR	26.40	0.65	0.003	0.000	ERR	ERR	ERR	ERR	65.35	52.00
MIN	ERR	ERR	ERR	ERR	0.002	0.113	0.15	0.53	ERR	ERR	ERR	ERR	0.00	0.37	0.000	0.000	ERR	ERR	ERR	ERR	6.32	29.80

Station	Sample date	mg/l dAg	mg/l dAl	mg/l dTAs	mg/l dAu	mg/l TCadmium	mg/l dCd	mg/l TCopper	mg/l dCu	mg/l TCr	mg/l dCr	mg/l TFe3	mg/l dFe3	mg/l TLead	mg/l dPb	mg/l TMercury	mg/l dHg	mg/l TMn	mg/l dMn	mg/l dSe	mg/l dSr	mg/l TZinc	mg/l dZn
TTINFL	05-Jun-87					0.056		0.74						2.49		0.0002						15.84	
TTINFL	10-Jun-87					0.003		1.64						19.5		<.001						20	
TTINFL	16-Jun-87					0.063		0.76						<.02		<.001						15.2	
TTINFL	25-Jun-87					0.002		1.14						0.23		<.001						19.5	
TTINFL	01-Jul-87					0.066		1.39						7.19		0.0010						19.7	
TTINFL	07-Jul-87					0.07		0.97						3.99		<.001						16.15	
TTINFL	15-Jul-87					0.138		3.85						26.4		<.001						33.17	
TTINFL	24-Jul-87					0.092		1.46						10.66		<.001						22.19	
TTINFL	30-Jul-87					0.077		0.15						0.17		<.001						16.9	
TTINFL	06-Aug-87					0.085		0.59						1.13		<.001						21.4	
TTINFL	11-Aug-87					0.084		0.57						0.76		<.001						20.7	
TTINFL	18-Aug-87					0.089		0.6						0.88		<.001						23.6	
TTINFL	27-Aug-87																						
TTINFL	05-Sep-87					0.119		0.55						0.99		<.001						31.6	
TTINFL	13-Apr-88					0.180		0.71						0.07		<.001						60.6	
TTINFL	27-May-88					0.058		1.38						3.78		<.001						20.9	
TTINFL	03-Jun-88					0.080		1.76						2.45		<.001						27.4	
TTINFL	13-Jun-88					0.030		2.04						4.17		<.001						27.1	
TTINFL	24-Jun-88					0.343		3.5						17.1		<.001						37.2	
TTINFL	30-Jun-88					0.134		4.21						26.3		<.001						46.1	
TTINFL	15-Jul-88					0.134		1.69						2.12		<.001						60.9	
TTINFL	22-Jul-88					0.120		1.47						1.11		<.001						38.6	
TTINFL	29-Jul-88																						
TTINFL	06-Aug-88					0.163		2.26						0.18		<.001						39.8	
TTINFL	12-Aug-88					0.397		6.18						22.9		<.001						64.18	
TTINFL	18-Aug-88					0.108		2.14						0.071		<.001						44.9	
TTINFL	27-Aug-88					0.274		3.56						3.13		<.001						62.2	

Station	Sample	date	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
			dAg	dAl	dTAs	dAu	TCadmium	dCd	TCopper	dCu	TCr	dCr	TFe3	dFe3	TLead	dPb	THg	TMn	dMn	dSe	dSr	TZinc	dZn
TTINFL	01-Sep-88						0.227		2.96					4.25		<.001						45.6	
TTINFL	07-Sep-88						0.039		0.18					0.31		<.001						12	
TTINFL	15-Sep-88						0.075		2.09					4.97		<.001						51.5	
TTINFL	23-Sep-88						0.190		1.23					0.96		<.001						34.9	
TTINFL	26-Sep-88						0.148		1.18					0.51		<.001						32.1	
TTINFL	05-Oct-88																						
TTINFL	12-Oct-88						0.373		29					0.68		<.001						42.8	
TTINFL	26-May-89						0.064		0.680					1.57		<.001						13.43	
TTINFL	07-Jun-89						0.100		1.320					1.35		0.0020						10.05	
TTINFL	13-Jul-89						0.125		1.330					1.55		0.0030						25.92	
TTINFL	29-Aug-89						0.258		4.630					0.74		<.001						65.35	
TTINFL	26-Sep-89						0.152		3.870					1.44		<.001						6.32	
TTINFL	26-Oct-89						0.129		2.170					0.15								31.5	
TTINFL	27-Jun-90						0.1275	0.1125	1.67	0.53				4.26	0.371	<.0002	<.0002					37	29.8
TTINFL	30-Jul-90						0.128		3.34					2.30		0.002						43.8	
TTINFL	30-Aug-90						0.2560		4.770					11.10		<.002						30	
TTINFL	12-Sep-90						0.2920	0.2890	2.100	1.3				3.12	0.646	<.002						52	52
TTINFL	06-Jun-91																						
TTINFL	11-Jun-91																						
TTINFL	17-Jun-91																						
TTINFL	18-Jun-91																						
TTINFL	20-Jun-91																						
TTINFL	24-Jun-91																						
TTINFL	01-Jul-91																						

TTINFL TEL 7-7

**Lake Emma Inflow to Mine**

TABLE 1  
San Juan County Mining Venture-Sunnyside Mine/Mayflower Mill  
Water Data Summary Site: TT003\*  
Data Available thru:  
08-Jul-91

Mean	0.033	6.0	6.4	8.0	118	179	147	31	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
MAX	0.144	7.3	7.7	15.0	205	183	840	478	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
MIN	0.005	4.8	3.9	3.0	60	174	42	0	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR

Station	Sampledate	lab	Qmgd	FieldpH	labpH	FieldT	FieldCond	labcond	TDS(180)	TSS	Hard	Eff	TA	kCa	COAc	CaCo3	NO3	NH3-N	Cyanide	Fl
TT003	25-Jun-87	IML		6	6.50	11.1	205		240	1										
TT003	15-Jul-87	IML	0.05	5.9	6.30	10	170		168	<1										
TT003	06-Aug-87	IML	0.04	5.66	6.80	6	130		146	<1										
TT003	12-Sep-87	IML	0.03	5.89	6.20	5.5	119	174	120	<.01										
TT003	06-Oct-87	IML	0.01	5.88	6.30	8		183	122	2										
TT003	24-Jun-88	IML		5.99	6.40	7.5			164	<.001										
TT003	15-Jul-88	IML		5.84	5.80	4			168	2										
TT003	31-Aug-88	IML	0.03	5.23	6.2	8			840	30										
TT003	26-Sep-88	IML	0.03	5.44	6.30	7			58	17										
TT003	12-Oct-88	IML	0.02	6.44	6.60	3			60	478										
TT003E	21-Jun-89	IML	0.02	6.81	7.7	7	85		62	0.4										
TT003W	21-Jun-89	IML	0.03	6.2	7.43	7	60		44	6										
TT003	25-Jul-89	IML	0.02	6.57	6.7	15			70	2										
TT003	29-Aug-89	IML	0.05	6.28	6.86	10.5	155		112	1										
TT003	26-Sep-89	IML	0.03	4.77	4.85	9	75		80	3										
TT003	13-Oct-89	IML	0.029	7.33	7.65	5			192	17										
TT003	25-Jul-90	IML	0.014	5.61	5.63	12.0			42	3										
TT003	20-Aug-90	IML	0.014	6.39	6.62	6.0			60	7										
TT003	19-Sep-90	IML	0.0050	5.78	3.86	10.0			48	14										
TT003	01-Jul-91	IML	0.144	6.8		7.6	60													

TABLE 2

San Juan County Mining Venture-Sunnyside Mine/Mayflower Mill

Water Data Summary METALS

Date Available thru: Site: TT003\*

08-Jul-91

Mean	ERR	ERR	ERR	ERR	0.003	ERR	0.03	ERR	ERR	ERR	ERR	ERR	ERR	0.17	ERR	0.000	ERR	ERR	ERR	ERR	ERR	1.88	ERR
MAX	ERR	ERR	ERR	ERR	0.012	ERR	0.17	ERR	ERR	ERR	ERR	ERR	ERR	0.88	ERR	0.001	ERR	ERR	ERR	ERR	ERR	5.90	ERR
MIN	ERR	ERR	ERR	ERR	0.000	ERR	0.00	ERR	ERR	ERR	ERR	ERR	ERR	0.00	ERR	0.000	ERR	ERR	ERR	ERR	ERR	0.04	ERR

Station	Sample Date	mg/l dAg	mg/l dAl	mg/l dTAs	mg/l dAu	mg/l TCadmium	mg/l dCd	mg/l TCopper	mg/l dCu	mg/l TCr	mg/l dCr	mg/l TFe3	mg/l dFe3	mg/l TLead	mg/l dPb	mg/l THg	mg/l TMn	mg/l dMn	mg/l dSe	mg/l dSr	mg/l TZinc	mg/l dZn
TT003	25-Jun-87					<.002		<.01						<.02		<.001						3.91
TT003	15-Jul-87					0.006		0.02						<.02		<.001						3.57
TT003	06-Aug-87					0.007		0.04						<.02		<.001						2.7
TT003	12-Sep-87					0.008		<.01						<.02		<.001						2.62
TT003	06-Oct-87					<.002		0.01						<.02		<.001						1.87
TT003	24-Jun-88					0.012		0.03						<.002		<.001						3.76
TT003	15-Jul-88					0.002		0.01						0.01		<.001						5.56
TT003	31-Aug-88					0.007		0.01						0.37		<.001						2.02
TT003	26-Sep-88					<.002		<.01						0.38		<.001						0.29
TT003	12-Oct-88					<.002		0.09						0.06		<.001						0.49
TT003E	21-Jun-89					<.002		<.01						0.01		<.001						0.04
TT003W	21-Jun-89					0.008		0.030						0.18		<.001						0.55
TT003	25-Jul-89					0.002		<.01						0.076		<.0002						0.68
TT003	29-Aug-89					0.002		<.01						0.05		<.001						0.78
TT003	26-Sep-89					<.002		0.170						0.44		<.001						0.31
TT003	13-Oct-89					<.002		0.040						0.03		0.0010						5.9
TT003	25-Jul-90					0.0004		0.010						0.555		<.0002						0.21
TT003	20-Aug-90					0.0005		0.030						0.163		<.0002						0.21
TT003	19-Sep-90					<.002		0.080						0.882		<.002						0.34
TT003	01-Jul-91																					

**Animas River**

TABLE 1

San Juan County Mining Venture-Sunnyside Mine/Mayflower Mill

Water Data Summary

Site: AR3.\*

Date Available thru:

09-Jul-91

Mean	7.7	7.3	7.7	168	264	164	4	129	28	0	0.40	ERR	0.17	0.00	0.63
MAX	8.5	7.9	12.0	300	371	302	21	168	34	0	2.55	ERR	0.90	0.00	1.49
MIN	6.7	6.4	2.0	110	197	58	0	86	19	0	0.01	ERR	0.00	0.00	0.31

Station	Sampledate	lab	Qmgd	FieldpH	labpH	C	uS	uS	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
						FieldT	FieldCond	labcond	TDS(180)	TSS	Hard	Alk	Ac	NO3&NO2	NO2	NH3-N	Cyanide
AR3.5	01-Jul-86			7.7					85	1							
AR3.5	01-Aug-86			7.8					113	2							0.001
AR3.5	01-Sep-86			7.5					117	7							0.004
AR3.5	01-Oct-86			7.3					148	1	137			0.01		0.01	0.001
AR3.5	02-Sep-87	IML	47.5	7.6	7.6	11.0	160.0	233	170	nd	105	32	nd	0.15		0.03	0.31
AR3.5	03-May-88	IML	38.4	7.9	7.0	8.0	120.0	260	166	3	115	26	nd	0.23		0.03	nd 0.4
AR3.5	18-Oct-88	IML	26.7	7.1	7.0			270	200	3	125	34	nd	2.55		0.90	nd 0.39
AR3.5	20-Apr-89	IML	115.9	7.9	6.4	9.0	150.0	218	58	2	93	19	nd	0.31		0.35	nd 0.39
AR3.5	16-May-89	IML	76.0	7.1	6.9	4.5	110.0	197	112	1	86	27	<1	0.31		0.1	<.005 0.52
AR3.5	30-Oct-89	IML	17.6	8.0	7.8	2.0	170.0	339	302	2	139	32	0	0.14		<.01	<.005 0.53
AR3.5	12-Mar-90	IML/A5notmeas		8.2	7.0	2.0	300.0	371	272	6	168	31	0	0.16		0.199	<.005 0.528
AR3.5	04-May-90	IML	35.7	8.5	7.3	8.0	165.0	290	186	1	130	30	0	0.23		0.07	<.005 0.9
AR3.25	30-Jul-90	IML		7.7	7.9	12.0		230	192	5	112	23	0	0.39		0.08	<.005 0.67
AR3.5	30-Jul-90	IML		7.7	7.8	12.0		230	194	2	108	23	0	0.44		0.06	<.005 0.52
AR3.5	24-Sep-90	IML/THE									160						
AR3.5	30-Oct-90	IML	47.0	8.0	6.8	10.0		254	136	3	112	31	0	0.06		0.36	<.005 1.49
AR3.5	06-Dec-90	IML/THE		7.7	7.7						138						
AR3.5	11-Dec-90	IML/THE									138						
AR3.5	15-Jan-91	IML/THE									143						
AR3.5	24-Jan-91	IML/THE									157						
AR3.5	12-Mar-91	IML/THE									152						
AR3.5	30-Apr-91	IML/RN	35.1	6.7	7.8	5.9		274.0	172	21	124	32	0	0.19		<.04	<.01 0.91



TABLE 2

San Juan County Mining Venture-Sunnyside Mine/Mayflower Mill

Water Data Summary METALS

Date Available thru: Site: AR3.\*

09-Jul-91

Mean	0.00	0.04	0.00	0.00	0.004	0.002	0.02	0.01	ERR	0.00	ERR	0.06	0.08	0.00	0.000	0.000	ERR	0.24	0.00	0.40	0.27	0.43
MAX	0.00	0.40	0.05	0.00	0.006	0.006	0.03	0.04	ERR	0.00	ERR	0.35	0.25	0.03	0.000	0.000	ERR	0.49	0.00	0.41	0.42	0.98
MIN	0.00	0.00	0.00	0.00	0.001	0.000	0.01	0.00	ERR	0.00	ERR	0.00	0.01	0.00	0.000	0.000	ERR	0.00	0.00	0.38	0.16	0.17

Station	Sample	date	mg/l dAg	mg/l dAl	mg/l dAs	mg/l dAu	mg/l TCd	mg/l dCd	mg/l TCu	mg/l dCu	mg/l TCr	mg/l dCrT	mg/l TFe	mg/l dFeIII	mg/l TPb	mg/l dPb	mg/l THg	mg/l dHg	mg/l TMn	mg/l dMn	mg/l dSe	mg/l dSr	mg/l TZn	mg/l dZn
AR3.5	01-Jul-86						0.001		0.01					0.25		0.00036							0.16	
AR3.5	01-Aug-86						0.004		0.025					0.015		0.0001							0.18	
AR3.5	01-Sep-86						0.006		0.033					0.063		0.00039							0.417	
AR3.5	01-Oct-86						0.004		0.02					0.01		0.00033							0.31	
AR3.5	02-Sep-87		nd	nd	nd			0.002		nd		nd		nd		nd		nd		0.35	nd			0.37
AR3.5	03-May-88		nd	nd	nd			nd		nd		nd		nd		nd		nd		0.3	nd			0.49
AR3.5	18-Oct-88		nd	nd	nd			nd		0.04		nd		0.35		0.03		nd		0.18	nd			0.29
AR3.5	20-Apr-89		nd	0.1	nd			0.006		0.01		nd		0.12		nd		nd		0.49	nd			0.98
AR3.5	16-May-89		<.01	<.01	0.049			0.002		<.01		<.02		0.11		<.02		<.001		0.26	<.005			0.5
AR3.5	30-Oct-89		nd	0.4	nd			0.002		0.01		nd		0.16		nd		nd		nd	nd			0.17
AR3.5	12-Mar-90		nd	nd	0.0006			0.0027		nd		nd		nd		0.005		nd		0.22	nd			0.42
AR3.5	04-May-90		nd	nd	nd			0.0015		nd		nd		nd		nd		nd		0.23	nd			0.48
AR3.25	30-Jul-90		<.01	<.1	0.0003			0.0014		<.01		<.02		<.05		0.019		<.0002		0.14	<.0002			0.27
AR3.5	30-Jul-90		<.01	<.1	0.0009			0.0013		<.01		<.02		<.05		<.004		0.0002		0.14	<.0002			0.27
AR3.5	24-Sep-90																							
AR3.5	30-Oct-90		<.01	<.1	0.0008	<.05		0.0016		<.01		<.02		<.05		<.004		<.001			0.38	0.000	0.38	0.45
AR3.5	06-Dec-90																							
AR3.5	11-Dec-90																							
AR3.5	15-Jan-91																							
AR3.5	24-Jan-91																							
AR3.5	12-Mar-91																							
AR3.5	30-Apr-91		<.01	<.1	<.005	<.05		0.0007		<.01		<.02		<.05		<.005		<.001			0.21	<.005	0.41	0.46

TABLE 3

San Juan County Mining Venture-Sunnyside Mine/Mayflower Mill

Water Data Summary CAT/AN BAL

Date Available thru: Site: AR3.\*

09-Jul-91

Mean	34	0	2	88	42	3	1	2
MAX	41	0	4	137	61	7	2	3
MIN	23	0	0	56	26	0	0	1

Station	Sample date	mg/l Bicarb	mg/l CO3	mg/l Chloride	mg/l Sulfate	mg/l Ca	mg/l Mg	mg/l K	mg/l Na	% cat/andiff
AR3.5	01-Jul-86									
AR3.5	01-Aug-86									
AR3.5	01-Sep-86									
AR3.5	01-Oct-86									
AR3.5	02-Sep-87	39	0	0	70	41	0	nd	2	1.88
AR3.5	03-May-88	31	0	2	80	44	1	nd	2	1.06
AR3.5	18-Oct-88	41	0	nd	90	47	2	1	2	0.77
AR3.5	20-Apr-89	23	0	0	70	26	7	0	2	2.1
AR3.5	16-May-89	27	0	3	56	32	1	1	1	1.1
AR3.5	30-Oct-89	38.65	0	0	109.05	50.53	3.13	0.88	2.5	1.43
AR3.5	12-Mar-90	37.28	0	3.21	136.62	60.64	4.16	0.84	2.7	0.73
AR3.5	04-May-90	36.1	0	0.5	99.2	46.2	3.5	1.5	2.1	0.56
AR3.25	30-Jul-90	28	0	2.1	85.6	38.6	4	1.5	2.1	1.04
AR3.5	30-Jul-90	28	0	4.2	86	40.2	2	1.6	2.4	1.84
AR3.5	24-Sep-90									
AR3.5	30-Oct-90	37.8	0	4.08	79.4	36.9	4.93	0.52	1.7	1.13
AR3.5	06-Dec-90									
AR3.5	11-Dec-90									
AR3.5	15-Jan-91									
AR3.5	24-Jan-91									
AR3.5	12-Mar-91									
AR3.5	30-Apr-91	38.4	0	3.04	94	43.1	3.92	0.63	2.3	1.65

TABLE 4

San Juan County Mining Venture-Sunnyside Mine/Mayflower Mill

Water Data Summary BIOMONITORING DATA

Date Available thru: Site: AR3.\*

09-Jul-91

Mean	100	3	291	980	198	ERR	136	116	ERR	145.00	0.00
MAX	100	5	306	980	198	ERR	136	200	ERR	290.00	0.00
MIN	100	0	275	980	198	ERR	136	32	ERR	0.00	0.00

Station	Sampledate	LC50	%SURV	LC50	%SURV	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	Date	strt	Time	strtpH	strtpHend
		FHM	FHM100%	Cerio	Cerio100%	ReconHard	ReconCond	ReconAlk	RcvHard	EFFHard	EFFAlk	EFFCon	EFFAm	EFFCl							
AR3.5	01-Jul-86																				
AR3.5	01-Aug-86																				
AR3.5	01-Sep-86																				
AR3.5	01-Oct-86																				
AR3.5	02-Sep-87																				
AR3.5	03-May-88																				
AR3.5	18-Oct-88																				
AR3.5	20-Apr-89																				
AR3.5	16-May-89																				
AR3.5	30-Oct-89																				
AR3.5	12-Mar-90	>100	100	24	5	306.00	980					200		290	<.02						
AR3.5	04-May-90																				
AR3.25	30-Jul-90																				
AR3.5	30-Jul-90																				
AR3.5	24-Sep-90																				
AR3.5	30-Oct-90																				
AR3.5	06-Dec-90																				
AR3.5	11-Dec-90																				
AR3.5	15-Jan-91																				
AR3.5	24-Jan-91																				
AR3.5	12-Mar-91																				
AR3.5	30-Apr-91				0	275		198		136	32		ND	ND							

**Boulder Creek Above**

TABLE 1

San Juan County Mining Venture-Sunnyside Mine/Mayflower Mill

Water Data Summary

Site: BC1\*

Date Available thru:

09-Jul-91

Mean	7.3	7.3	9.0	70	134	77	5	67	25	0	0.14	ERR	0.06	0.00	0.86
MAX	8.2	7.8	24.0	90	168	202	13	93	34	0	0.25	ERR	0.37	0.00	3.21
MIN	6.6	6.9	2.0	38	94	26	0	52	19	0	0.01	ERR	0.00	0.00	0.23

Station	Sampledate	lab	Dmgd	FieldpH	labpH	C	uS	uS	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
						FieldT	FieldCond	labcond	TDS(180)	TSS	Hard	Alk	Ac	NO3&NO2	NO2	NH3-N	Cyanide
BC1	01-Jul-86	SGC		6.68		15			34	1							
BC1	01-Sep-86	SGC		7.29		24			54	3							
BC1	01-Oct-86	SGC		6.77		17			65	13				0.01		0.01	0.001
BC1	28-Oct-88	IML	0.82	8.24	7.1	3.5		155	104	12	79	34	nd	0.14		0.37	nd
BC1	26-Apr-89	IML	5.23	7.25	6.9	2	38	94	26	7	93	19	nd	0.17		nd	nd
BC1	30-Oct-89	IML	1.17	7.39	6.9	2.5	90	168	202	2	63	28	0	0.21		<.01	<.005
BC1	04-May-90	IML	1.89	7.99	7.5	3.2	83	122	74	<.5	52	21	0	0.25		<.02	<.005
BC1	30-Oct-90	IML	2.00	7.83	7.8	7.5		118	42	3	60	27	0	0.06		0.07	<.005
BC1	30-Apr-91	IML/RN	1.22	6.58	7.6	6.2		149	94	2	55	24	0	0.14		<.04	<.01

TABLE 2

San Juan County Mining Venture-Sunnyside Mine/Mayflower Mill

Water Data Summary METALS

Date Available thru: Site: BC1\*

09-Jul-91

Mean	0.00	0.05	0.00	0.00	0.017	0.001	0.02	0.01	ERR	0.00	ERR	0.08	0.02	0.01	0.001	0.000	ERR	0.06	0.00	0.19	0.11	0.05
MAX	0.00	0.10	0.00	0.00	0.030	0.002	0.03	0.02	ERR	0.00	ERR	0.49	0.05	0.08	0.003	0.000	ERR	0.34	0.00	0.20	0.14	0.10
MIN	0.00	0.00	0.00	0.00	0.010	0.000	0.01	0.00	ERR	0.00	ERR	0.00	0.01	0.00	0.000	0.000	ERR	0.00	0.00	0.18	0.10	0.00

Station	Sample Date	mg/l dAg	mg/l dAl	mg/l dAs	mg/l dAu	mg/l TCd	mg/l dCd	mg/l TCu	mg/l dCu	mg/l TCr	mg/l dCrT	mg/l TFe	mg/l dFeIII	mg/l TPb	mg/l dPb	mg/l THg	mg/l dHg	mg/l TMn	mg/l dMn	mg/l dSe	mg/l dSr	mg/l TZn	mg/l dZn
BC1	01-Jul-86					0.010		0.01						0.01		0.00						0.10	
BC1	01-Sep-86					0.030		0.03						0.05		0.00						0.14	
BC1	01-Oct-86					0.010		0.01						0.01		0.00						0.10	
BC1	28-Oct-88	nd	0.10	nd			0.002		0.01		nd		0.49		0.08		nd		0.34	nd			0.10
BC1	26-Apr-89	nd	0.10	nd			nd		0.01		nd		nd		nd		nd		nd	nd			0.09
BC1	30-Oct-89	nd	nd	nd			0.002		nd		nd		.06		nd		nd		nd	nd			nd
BC1	04-May-90	nd	nd	nd			0.000		0.02		nd		nd		nd		nd		nd	nd			0.04
BC1	30-Oct-90	<.01	<.1	0.001	<.05		<.0002		<.01		<.02		<.05		<.004		<.001		<.02	<.0002	0.18		0.03
BC1	30-Apr-91	<.01	0.10	<.005	<.01		<.0005		<.01		<.02		<.05		<.005		<.005		<.02	<.005	0.20		0.04

TABLE 3

San Juan County Mining Venture-Sunnyside Mine/Mayflower Mill

Water Data Summary CAT/AN BAL

Date Available thru: Site: BC1\*

09-Jul-91

Mean	31	0	2	29	21	1	1	1
MAX	41	0	6	40	28	2	1	2
MIN	23	0	0	13	12	1	0	0

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----- mg/l  mg/l  mg/l  mg/l  mg/l  mg/l  mg/l  mg/l  mg/l  %
StationSampledate Bicarb  CO3 ChlorideSulfate  Ca   Mg   K   Na cat/andiff
BC1  01-Jul-86
BC1  01-Sep-86
BC1  01-Oct-86
BC1  28-Oct-88  41.0    0.0    2.0   40.0  28.0    2.0   nd   2.0    2.5
BC1  26-Apr-89  23.0    0.0    0.0   13.0  12.0    1.0   1.0   0.0    3.3
BC1  30-Oct-89  33.8    0.0    0.0   36.6  24.4    0.5   0.7   1.4    1.3
BC1  04-May-90  25.6    0.0    1.4   31.9  19.3    1.0   1.4   0.9    1.0
BC1  30-Oct-90  33.6    0.0    6.1   25.5  20.9    2.0   0.3   0.9    0.2
BC1  30-Apr-91  28.7    0.0    3.0   28.6  20.1    1.2   0.4   1.7    0.8

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TABLE 4

San Juan County Mining Ventura-Sunnyside Mine/Mayflower Mill

Water Data Summary BIDMONITORING DATA

Date Available thru:

Site: BC1\*

09-Jul-91

Mean	ERR	10	275	ERR	198	ERR	56	32	ERR	0.00	0.00
MAX	ERR	10	275	ERR	198	ERR	56	32	ERR	0.00	0.00
MIN	ERR	10	275	ERR	198	ERR	56	32	ERR	0.00	0.00

Station	Sample Date	LC50	%SURV	LC50	%SURV	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	Date	strt	Time	strtpH	strtpHend
BC1	01-Jul-86																				
BC1	01-Sep-86																				
BC1	01-Oct-86																				
BC1	28-Oct-88																				
BC1	26-Apr-89																				
BC1	30-Oct-89																				
BC1	04-May-90																				
BC1	30-Oct-90																				
BC1	30-Apr-91			TDX	10	275		198		56	32			ND		ND					



**Cement Creek  
(above Mine)**

TABLE 1

San Juan County Mining Venture-Sunnyside Mine/Mayflower Mill

Water Data Summary

Site: CC1\*

Date Available thru:

08-Jul-91

Mean	4.3	4.0	8.2	263	410	320	21	174	0	40	0.24	ERR	0.07	0.00	1.26
MAX	6.1	5.2	19.5	1000	1060	945	104	518	4	166	0.62	ERR	0.64	0.02	4.79
MIN	3.2	3.1	0.0	110	168	62	1	43	0	1	0.00	ERR	0.00	0.00	0.07

Station	Sampledate	lab	Qmgd	FieldpH	labpH	FieldT	FieldCond	labcond	TDS(180)	TSS	Hard	Alk	Ac	NO3&NO2	NO2	NH3-N	Cyanide	Fl
CC1	09-Apr-87	SBC			5.2			680	650	32								
CC1	28-May-87	RN	4.53	3.47	3.7	4.9	140		945		194	nd						
CC1	02-Jul-87	IML	11.47	3.9	4.2	8.8	150	285	110	10	58	0	28	0.62		0.07	nd	0.41
CC1	11-Aug-87	IML	2.44	4.29	4.3	13.2	170	186	140	1	90	4	14	0.18		0.03		0.44
CC1	06-Nov-87	IML	0.49	3.94	4.2	0		409	342	5	188	0	30	0.16		nd	nd	0.95
CC1	13-May-88	IML	9.78	4.4	3.3	5		177	120	13	51	nd	26	0.31		0.04	0.018	0.21
CC1	21-Jul-88	IML	1.65	4.11	4.6	19.5		204	198	3	91	1	14	0.18		0.07	nd	0.35
CC1	31-Aug-88	IML	1.09	5.57	4.7	6		266	186	10	126	1	21	0.18		0.12	nd	0.87
CC1	14-Sep-88	IML	1.87	3.33	3.6	9		351	236	22	143	0	53	0.3		0.1	nd	0.65
CC1	05-Oct-88	IML	0.84	4.62	4.1	6.5		304	208	34	124	nd	28	0.22		0.64	nd	0.67
CC1	26-Apr-89	IML	7.00	4.06	3.6	8	140	260	62	22	93	0	48	0.32		nd	nd	0.84
CC1	31-May-89	IML	15.67	3.86	4.1	12	150	170	468	15	43		11	0.16		<.01	<.005	4.79
CC1	29-Jun-89	IML	5.06	4.59	4.6	7.7	110	169	114	3	66	0	14	0.185		<.1	<.005	0.527
CC1	28-Jul-89	IML	notmeas	4.54	4.4	11	170	213	172	3	95	<.01	13	0.1		<.01	<.005	0.77
CC1	28-Aug-89	IML	0.64	4.24	4.8	10	230	308	210	2	129	2	21	0.24		<.01	<.005	0.75
CC1	25-Sep-89	IML	0.57	4.34	4.4	12.5	250	387	256	6	157	0	1	0.13		0.15	<.005	0.76
CC1	27-Oct-89	IML	notmeas	4.95	4.3	6	260	447	296	13	173	0	18	0.31		<.01	<.005	0.94
CC1	30-Nov-89	IML	notmeas	4.41	4.3	0	390	606	366	4	248	0	30	0.29		<.01	<.005	1.08
CC1.5	12-Mar-90	IML	notmeas	3.83	3.6	7	1000	1060	842	29	518	0	75	0.09		nd	nd	2.66
CC1	07-May-90	IML	3.20	3.54	3.3	2		614	286	54	99	0	128	0.48		0.08	<.005	1.66
CC1	25-Jun-90	IML	8.39	4.32	3.8	13		168	82	56	52	0	15	0.154		0.19	<.005	0.43
CC1	31-Jul-90	IML	0.58	4.32	4.1	11		269	220	8	104	0	25	0.44		0.06	<.005	0.07
CC1	27-Aug-90	IML	notmeas	4.08	4.2	14		349	288	39	120	0	23	<.04		0.03		1.19
CC1	25-Sep-90	IML	notmeas	4.22	3.4	11		338	186	6	124	0	27	0.18		0.13		1.5
CC1	15-Oct-90	IML	3.96	6.14	3.4	8		444	204	20	112	0	65	0.3		0.04	<.005	1.71
CC1	28-Nov-90		no access															
CC1	07-Jan-91		no access															
CC1.5	11-Feb-91	IML	0.23	5.65	3.5	1.9		777	704	4	399	0	75	0.17		<.02		3.05
CC1.5	28-Mar-91	IML	0.32	4.2	4.5	5		839	694	104	425	0	60	0.3		0.12		2.23
CC1.5	17-Apr-91	THE	notmea								458							
CC1.5	23-Apr-91	IML	2.24	3.23	3.1	7.6		789	368	51	399	0	166	0.27		<.04		3.24

TABLE 2

San Juan County Mining Venture-Sunnyside Mine/Mayflower Mill

Water Data Summary METALS

Date Available thru: Site: CC1\*

08-Jul-91

Mean	0.00	3.07	0.00	0.00	0.007	0.016	0.32	0.38	ERR	0.00	ERR	2.52	0.14	0.06	0.250	0.000	ERR	2.12	0.00	1.18	3.53	3.79
MAX	0.00	12.90	0.03	0.00	0.008	0.070	0.33	1.93	ERR	0.00	ERR	35.70	0.18	0.29	0.300	0.000	ERR	10.38	0.01	1.67	4.80	9.76
MIN	0.00	0.00	0.00	0.00	0.005	0.000	0.30	0.01	ERR	0.00	ERR	0.00	0.10	0.00	0.200	0.000	ERR	0.47	0.00	0.36	2.25	1.09

Station	Sample date	mg/l dAg	mg/l dAl	mg/l dAs	mg/l dAu	mg/l TCd	mg/l dCd	mg/l TCu	mg/l dCu	mg/l TCr	mg/l dCrT	mg/l TFe	mg/l dFeIII	mg/l TPb	mg/l dPb	mg/l THg	mg/l dHg	mg/l TMn	mg/l dMn	mg/l dSe	mg/l dSr	mg/l TZn	mg/l dZn
CC1	09-Apr-87					0.005		0.33					0.1			0.3						4.8	
CC1	28-May-87					0.008		0.3					0.18			0.2						2.25	
CC1	02-Jul-87	nd	0.8	nd			0.032		0.13		nd		0.72		nd		nd		1	0.012			3.8
CC1	11-Aug-87	nd	1.2	nd			0.017		0.22		nd		0.28		nd		nd		0.9	nd			1.94
CC1	06-Nov-87	nd		nd			0.01				nd		0.11		nd		nd		1.36	nd			4.01
CC1	13-May-88	nd	1.7	nd			0.012		0.35		nd		1.98		nd		nd		0.88	nd			2.24
CC1	21-Jul-88	nd	1	nd			0.007		0.19		nd		0.31		nd		nd		0.62	nd			1.79
CC1	31-Aug-88	nd	0.2	nd			0.008		0.27		nd		0.31		nd		nd		1.06	nd			2.6
CC1	14-Sep-88	nd	3.2	nd			0.015		0.56		nd		3.99		0.05		nd		1.81	nd			3.73
CC1	05-Oct-88	nd	5.21	0.005			0.012		0.17		nd		1.71		0.02		nd		1.09	nd			2.84
CC1	26-Apr-89	nd	3.93	nd			0.018		0.67		nd		1.27		0.02		nd		1.11	nd			3.33
CC1	31-May-89	nd	1.8	nd			0.007		0.24		nd		1.24		0.04		nd		0.47	nd			1.35
CC1	29-Jun-89	nd	0.75	nd			nd		0.16		nd		0.27		nd		nd		0.47	nd			1.26
CC1	28-Jul-89	nd	nd	nd			0.007		0.14		nd		0.17		0.02		nd		0.54	nd			1.38
CC1	28-Aug-89	<.01	1.27	nd			0.01		0.16		nd		0.08		0.17		nd		0.73	nd			2.31
CC1	25-Sep-89	nd	1.7	nd			0.005		0.01		nd		0.08		nd		nd		0.79	nd			2.69
CC1	27-Oct-89	nd	2.8	nd			.005		0.2		nd		0.08		nd		nd		0.91	nd			3.11
CC1	30-Nov-89	nd	3.5	nd			0.0062		0.22		nd		nd		nd		nd		1.07	nd			3.51
CC1.5	12-Mar-90	nd	nd	*****			0.0333		0.01		nd		0.98		0.257		nd		10.38	nd			7.03
CC1	07-May-90	nd	11.6	0.001			0.0454		1.54		nd		9.3		0.018		nd		3.31	nd			6.86
CC1	25-Jun-90	<.01	1	<.0003			0.0166		0.17		<.02		0.22		<.004		<.0002		0.55	<.0002			1.09
CC1	31-Jul-90	<.01	1.8	<.0003			0.0145		0.26		<.02		0.55		0.018				0.79	<.0002			2.34
CC1	27-Aug-90	<.01	2.3	<.005			<.002		0.3		<.02		0.45		<.005		<.002		1.04	<.005			8.91
CC1	25-Sep-90	<.01	1.6	<.005			0.012		0.27		<.02		0.28		<.005				0.97	<.005			2.94
CC1	15-Oct-90	<.01	4.7	0.002			0.0309		0.68		<.02		3.92		0.032		<.0002		1.51	<.0002			4.19
CC1	28-Nov-90																						
CC1	07-Jan-91																						
CC1.5	11-Feb-91	<.01	6.7	<.0003	<.05		0.0701		0.4		<.02		1.07		0.29		<.0002		8.31	<.0002	1.5		7.43
CC1.5	28-Mar-91	<.01	5.2	<.005	<.05		0.015		0.26		<.02		0.32		0.25		<.001		6.78	<.005	1.67		5.97
CC1.5	17-Apr-91																						
CC1.5	23-Apr-91	<.01	12.9	0.03	<.005		0.008		1.93		<.02		35.7		0.26		<.001		6.61	<.005	0.36		9.76

TABLE 3

San Juan County Mining Venture-Sunnyside Mine/Mayflower Mill

Water Data Summary CAT/AN BAL

Date Available thru: Site: CC1\*

08-Jul-91

Mean	0	0	2	182	55	6	1	2
MAX	4	0	8	590	168	25	2	8
MIN	0	0	0	50	14	0	0	0

Station	Sample date	mg/l Bicarb	mg/l CO3	mg/l Chloride	mg/l Sulfate	mg/l Ca	mg/l Mg	mg/l K	mg/l Na	% cat/andiff
CC1	09-Apr-87									
CC1	28-May-87			nd	80.0	76.4	0.9	nd	3.0	
CC1	02-Jul-87	0.0	0.0	0.0	60.0	16.0	4.0	nd	1.0	18.0
CC1	11-Aug-87	4.0	0.0	1.0	96.0	28.0	5.0	nd	1.0	0.7
CC1	06-Nov-87	0.0	0.0	0.0	210.0	64.0	6.0	nd	2.0	0.4
CC1	13-May-88	nd	nd	nd	60.0	14.0	4.0	nd	nd	8.6
CC1	21-Jul-88	1.0	0.0	1.0	100.0	31.0	3.0	1.0	1.0	3.2
CC1	31-Aug-88	1.0	0.0	2.0	120.0	35.0	10.0	1.0	1.0	6.4
CC1	14-Sep-88	0.0	0.0	1.0	140.0	37.0	12.0	nd	2.0	15.4
CC1	05-Oct-88	0.0	0.0	2.0	140.0	42.0	5.0	1.0	1.0	2.5
CC1	26-Apr-89	0.0	0.0	3.0	86.0	23.0	1.0	1.0	4.0	8.0
CC1	31-May-89			<.01	50.2	16.8	0.2	0.9	8.4	1.4
CC1	29-Jun-89	0.0	0.0	1.0	65.0	22.0	3.0	2.0	2.0	2.1
CC1	28-Jul-89	<.01	<.01	1.1	90.9	36.5	1.1	1.2	1.0	7.3
CC1	28-Aug-89	2.3	<.1	1.1	138.3	46.8	3.0	0.8	1.5	2.1
CC1	25-Sep-89	0.0	0.0	<.01	156.6	21.1	24.6	0.7	2.1	0.8
CC1	27-Oct-89	0.0	0.0	0.0	184.8	64.0	3.1	0.6	2.2	0.1
CC1	30-Nov-89	0.0	0.0	0.0	275.7	94.3	3.2	0.5	5.1	0.4
CC1.5	12-Mar-90	0.0	0.0	5.4	542.4	168.4	23.7	0.6	4.9	2.7
CC1	07-May-90	0.0	0.0	0.5	217.3	38.6	0.8	1.4	1.1	0.7
CC1	25-Jun-90	0.0	0.0	4.2	57.6	17.7	2.0	0.8	0.4	2.0
CC1	31-Jul-90	0.0	0.0	2.1	125.5	36.9	3.0	1.4	1.6	0.2
CC1	27-Aug-90	0.0	0.0	2.1	135.0	43.4	3.0	0.9	1.5	1.6
CC1	25-Sep-90	0.0	0.0	4.2	140.0	48.2	1.0	0.6	1.9	1.2
CC1	15-Oct-90	0.0	0.0	8.2	160.0	20.9	14.7	0.6	3.5	1.6
CC1	28-Nov-90									
CC1	07-Jan-91									
CC1.5	11-Feb-91	0.0	0.0	2.0	439.0	135.0	15.2	0.7	4.1	2.5
CC1.5	28-Mar-91	0.0	0.0	3.1	462.0	147.0	14.1	0.6	2.3	0.6
CC1.5	17-Apr-91									
CC1.5	23-Apr-91	0.0	0.0	1.5	590.0	158.0	1.2	0.6	1.8	4.0

TABLE 4

San Juan County Mining Venture-Sunnyside Mine/Mayflower Mill

Water Data Summary BIOMONITORING DATA

Date Available thru: Site: CC1\*

08-Jul-91

Mean	0	0	308	ERR	ERR	ERR	653	ERR	950	0.20	ERR
MAX	0	0	308	ERR	ERR	ERR	653	ERR	950	0.20	ERR
MIN	0	0	308	ERR	ERR	ERR	653	ERR	950	0.20	ERR

Station	Sample Date	LC50 FHM	%SURV FHM100%	LC50 Cerio	%SURV Cerio100%	ReconHard	ReconCond	ReconAlk	RcvHard	EFFHard	EFFAlk	EFFCon	EFFAm	EFFCl	Date	strt	Time	strtpH	strtpHend
CC1	09-Apr-87																		
CC1	28-May-87																		
CC1	02-Jul-87																		
CC1	11-Aug-87																		
CC1	06-Nov-87																		
CC1	13-May-88																		
CC1	21-Jul-88																		
CC1	31-Aug-88																		
CC1	14-Sep-88																		
CC1	05-Oct-88																		
CC1	26-Apr-89																		
CC1	31-May-89																		
CC1	29-Jun-89																		
CC1	28-Jul-89																		
CC1	28-Aug-89																		
CC1	25-Sep-89																		
CC1	27-Oct-89																		
CC1	30-Nov-89																		
CC1.5	12-Mar-90	33	0	1	0	308				653		950	0.2						
CC1	07-May-90																		
CC1	25-Jun-90																		
CC1	31-Jul-90																		
CC1	27-Aug-90																		
CC1	25-Sep-90																		
CC1	15-Oct-90																		
CC1	28-Nov-90																		
CC1	07-Jan-91																		
CC1.5	11-Feb-91																		
CC1.5	28-Mar-91																		
CC1.5	17-Apr-91																		
CC1.5	23-Apr-91																		

**Eureka Creek**

TABLE 1

San Juan County Mining Venture-Sunnyside Mine/Mayflower Mill

Water Data Summary

Site: EC1

Date Available thru:

09-Jul-91

Mean	7.4	7.1	7.6	132	239	127	41	89	19	0	0.93	ERR	0.17	0.02	0.31
MAX	8.0	8.6	18.0	170	742	182	154	122	25	0	10.50	ERR	0.51	0.22	0.87
MIN	7.0	6.1	1.0	86	149	50	1	62	13	0	0.00	ERR	0.00	0.00	0.00

Station	Sampledate	lab	Qmgd	FieldpH	labpH	FieldT	FieldCond	labcond	TDS(180)	TSS	Hard	Alk	Ac	NO3&NO2	NO2	NH3-N	Cyanide	Fl
EC1	22-Oct-87	IML	0.05	7.3	8.6	7		742	134	28								
EC1	22-Jul-88	IML	0.68	7.0	7.1	8		150	140	4	71	21	nd	0.06		0.06	nd	0.18
EC1	31-Aug-88	IML	0.30	7.5	6.7	8.5		195	124	45	100	21	nd	0.38		0.26		0.49
EC1	26-Sep-88	IML	0.53	7.0	6.5	7		203	136	146	98	21	nd	0.15		0.06	nd	0.07
EC1	12-Oct-88	IML	0.43	7.0	6.1	2		207	154	154	93	19	nd	10.5		0.27	nd	0.14
EC1	25-May-89	IML	notmeas	7.2	6.4	1		149	92	13	62	14	<.1	0.2		0.506	0.215	0.233
EC1	07-Jun-89	IML	5.20	7.6	6.8	6.5	90	159	50	6	66	14	<.1	0.242		<.01	<.005	0.372
EC1	13-Jul-89	IML	1.78	7.8	7	8.5	86	159	106	6	68	21	<.01	0.143		<.1	<.005	na
EC1	29-Aug-89	IML	0.18	7.2	7.25	10	170	226	144	1	101	25	<.01	0.24		<.1	<.005	0.21
EC1	26-Sep-89	IML	0.07	7.8	7.08	8.5	145	287	182	10	122	23	0	0.14		0.13	<.005	0.23
EC1	26-Oct-89	IML	0.07	7.4	7.32	1.5	170	270	166	148	109	13	0	0.31		<.01	<.005	0.34
EC1	27-Jun-90	IML	3.80	8.0	7.57	10		174	94	2	68	15	0	<.04		0.34	<.005	0.41
EC1	30-Jul-90	IML	0.34	7.2	7.9	10		188	146	5	92	19	0	0.31		0.06		0.54
EC1	30-Aug-90	IML	0.30	7.6		18								0.17		0.38		
EC1	25-Sep-90	IML	0.26	7.4	7.18	8		236	106	4	110	17	0	0.24		0.34		0.87

TABLE 2

San Juan County Mining Venture-Sunnyside Mine/Mayflower Mill

Water Data Summary METALS

Date Available thru:

Site: EC1

09-Jul-91

Mean	0.00	1.02	0.01	ERR	0.003	0.001	0.10	0.03	ERR	0.00	ERR	0.72	0.17	0.08	0.000	0.000	ERR	0.88	0.00	ERR	0.95	0.56
MAX	0.01	14.10	0.12	ERR	0.003	0.006	0.10	0.16	ERR	0.00	ERR	7.72	0.17	0.75	0.000	0.001	ERR	3.47	0.00	ERR	0.95	0.99
MIN	0.00	0.00	0.00	ERR	0.003	0.000	0.10	0.00	ERR	0.00	ERR	0.00	0.17	0.00	0.000	0.000	ERR	0.14	0.00	ERR	0.95	0.24

Station	Sample	date	mg/l dAg	mg/l dAl	mg/l dAs	mg/l dAu	mg/l TCd	mg/l dCd	mg/l TCu	mg/l dCu	mg/l TCr	mg/l dCrT	mg/l TFe	mg/l dFeIII	mg/l TPb	mg/l dPb	mg/l THg	mg/l dHg	mg/l TMn	mg/l dMn	mg/l dSe	mg/l dSr	mg/l TZn	mg/l dZn
EC1	22-Oct-87						0.003		0.1						0.17		nd						0.95	
EC1	22-Jul-88		nd	nd	nd			T		nd		nd		nd		nd		nd		0.2	nd			0.24
EC1	31-Aug-88		nd	0.1	nd			T		0.01		nd		0.24		0.03		nd		0.89	nd			0.51
EC1	26-Sep-88		nd	nd	nd				0.002		0.08		nd		1.17		0.29		nd		1.06	nd		0.49
EC1	12-Oct-88		nd	14.1	0.005				0.006		0.16		nd		7.72		0.75		nd		3.47	nd		0.99
EC1	25-May-89		<.01	nd	<.005				0.004		0.01		nd		nd		<.02		0.001		0.87	<.005		0.78
EC1	07-Jun-89		<.01	nd	<.005				<.002		0.01		nd		nd		<.02		<.001		1.02	<.005		0.85
EC1	13-Jul-89		0.01	nd	<.005				<.002		0.02		nd		0.05		<.02		na		0.15	na		0.25
EC1	29-Aug-89		<.01	nd	<.005				<.002		0.02		nd		nd		0.08		<.001		0.43	<.005		0.39
EC1	26-Sep-89		nd	nd	0.12				nd				nd				nd		nd		0.89	nd		0.6
EC1	26-Oct-89		nd	nd	nd				0.003		0.02		nd		0.05		nd				0.14	nd		0.24
EC1	27-Jun-90		<.01	0.1	0.0012				0.0037		0.02		<.02		<.05		0.005		<.0002		0.9	<.0002		0.7
EC1	30-Jul-90		<.01	<.1	<.0003				0.0015		0.03		<.02		<.05		0.009		<.0002		0.53	<.0002		0.44
EC1	30-Aug-90		<.01	<.1	<.005				<.002		0.01		<.02		0.05		<.005		<.002		0.86	<.005		0.61
EC1	25-Sep-90		<.01	<.1	<.005				<.002		0.01		<.02		0.05		<.005		<.002		0.87	<.005		0.7



TABLE 3

San Juan County Mining Venture-Sunnyside Mine/Mayflower Mill

Water Data Summary CAT/AN BAL

Date Available thru:

Site: EC1

09-Jul-91

Mean	23	0	2	68	28	4	1	1
MAX	30	0	4	98	36	17	1	2
MIN	16	0	0	49	21	0	0	0

Station	Sample Date	Bicarb	CO3	Chloride	Sulfate	Ca	Mg	K	Na	cat/andiff	%
EC1	22-Oct-87										
EC1	22-Jul-88	25.0	0.0	nd	50.0	28.0	nd	nd	1.0		1.7
EC1	31-Aug-88	26.0	0.0	4.0	70.0	31.0	5.0	1.0	1.0		3.0
EC1	26-Sep-88	25.0	0.0	1.0	70.0	33.0	4.0	1.0	nd		0.3
EC1	12-Oct-88	23.0	0.0	1.0	70.0	33.0	3.0	nd	nd		0.5
EC1	25-May-89	16.5	0.0	<.01	48.8	20.7	2.4	0.5	1.4		0.4
EC1	07-Jun-89	16.5	<.1	2.8	51.2	22.1	2.7	0.4	1.8		0.4
EC1	13-Jul-89	25.0	<.01	1.8	48.6	25.4	1.0	0.5	0.7		2.8
EC1	29-Aug-89	30.1	<.1	1.1	78.6	34.7	3.5	0.7	1.2		1.8
EC1	26-Sep-89	27.8	0.0	<.1	97.5	21.1	16.9	0.6	1.3		0.5
EC1	26-Oct-89	15.7	0.0	0.0	89.1	33.7	6.2	0.5	1.0		1.6
EC1	27-Jun-90	18.6	0.0	2.1	51.4	22.5	3.0	0.8	0.4		1.2
EC1	30-Jul-90	23.3	0.0	4.2	66.3	28.9	4.9	1.3	1.1		0.7
EC1	30-Aug-90										
EC1	25-Sep-90	20.7	0.0	2.1	88.1	36.1	4.9	0.4	1.0		0.2

**American Tunnel Seep**

TABLE 1

San Juan County Mining Venture-Sunnyside Mine/Mayflower Mill

Water Data Summary

Site: ATSI\*

Date Available thru:

09-Jul-91

Mean	5.0	4.6	11.2	420	669	516	34	355	0	87	0.93	ERR	0.10	0.00	2.81
MAX	5.8	5.5	17.0	420	875	820	95	587	0	236	2.64	ERR	0.17	0.00	6.56
MIN	4.7	3.2	6.0	420	449	303	5	209	0	24	0.00	ERR	0.00	0.00	1.27

Station	Sampledate	lab	Dmgd	FieldpH	labpH	FieldT	FieldCond	labcond	TDS(180)	TSS	Hard	Alk	Ac	NO3&NO2	NO2	NH3-N	Cyanide	Fl	
ATSI	01-Sep-86		0.001	5.78					303	5									
ATSI	28-Oct-88		0.000																
ATSI	11-May-89	IML	0.007	4.76	4.60	9			875	820	31	587	0	236	1.91		0.17	nd	6.56
ATSI	22-Jun-89	IML	0.000																
ATSI	05-Oct-89	IML	0.007	5.20	4.94	6	420		647	482	6	312	0	24	2.64		<.01	<.005	1.68
ATSI	13-Jun-90	IML	0.003	4.73	5.51	10			449	410	95	209	0	28	<.04		0.13	<.005	1.27
ATSI	10-Jul-90	IML	0.001	5.05	3.22	17			704	564		311	0	60	0.09			<.005	1.73
ATSI	07-Aug-90	IML	0.000																
ATSI	11-Sep-90	IML	0.000																
ATSI	23-Oct-90	IML	0.000																
ATSI	14-May-91		0.000																
ATSI	13-Jun-91		0.014	4.76		14													

TABLE 2

San Juan County Mining Venture-Sunnyside Mine/Mayflower Mill

Water Data Summary METALS

Date Available thru: Site: ATSI\*

09-Jul-91

Mean	0.01	2.45	0.00	ERR	ERR	0.079	ERR	0.26	ERR	0.00	ERR	0.34	ERR	0.17	ERR	0.006	ERR	17.17	0.00	ERR	ERR	12.94
MAX	0.02	5.90	0.00	ERR	ERR	0.341	ERR	1.07	ERR	0.00	ERR	0.75	ERR	0.69	ERR	0.031	ERR	65.70	0.00	ERR	ERR	51.20
MIN	0.00	0.90	0.00	ERR	ERR	0.002	ERR	0.02	ERR	0.00	ERR	0.09	ERR	0.01	ERR	0.000	ERR	1.24	0.00	ERR	ERR	1.81

Station	Sample Date	mg/l dAg	mg/l dAl	mg/l dAs	mg/l dAu	mg/l TCd	mg/l dCd	mg/l TCu	mg/l dCu	mg/l TCr	mg/l dCrT	mg/l TFe	mg/l dFeIII	mg/l TPb	mg/l dPb	mg/l THg	mg/l dHg	mg/l TMn	mg/l dMn	mg/l dSe	mg/l dSr	mg/l TZn	mg/l dZn
ATSI	01-Sep-86						0.002		0.02				0.40		0.03		0.031		4.50				1.89
ATSI	28-Oct-88																						
ATSI	11-May-89	0.02	5.90	nd			0.341		1.07		<.02		0.09		0.69		nd		65.70	nd			51.20
ATSI	22-Jun-89																						
ATSI	05-Oct-89	nd	1.60	nd			0.034		0.11		nd		0.12		0.09		nd		4.44	nd			4.81
ATSI	13-Jun-90	<.01	0.90	0.002			0.002		0.03		<.02		0.32		0.03		<.0002		1.24	<.0002			1.81
ATSI	10-Jul-90	<.01	1.40	0.001			0.014		0.06		<.02		0.75		0.01		<.0002		9.95	<.0002			4.98
ATSI	07-Aug-90																						
ATSI	11-Sep-90																						
ATSI	23-Oct-90																						
ATSI	14-May-91																						
ATSI	13-Jun-91																						

TABLE 3

San Juan County Mining Venture-Sunnyside Mine/Mayflower Mill

Water Data Summary CAT/AN BAL

Date Available thru:

Site: ATSI\*

09-Jul-91

Mean	0	0	1	262	99	26	2	5
MAX	0	0	2	403	122	69	3	6
MIN	0	0	0	19	72	7	1	2

```

=====
----- mg/l  mg/l  mg/l  mg/l  mg/l  mg/l  mg/l  mg/l  %
StationSampledate Bicarb  CO3 ChlorideSulfate  Ca  Mg  K  Na cat/andiff
ATSI  01-Sep-86
ATSI  28-Oct-88
ATSI  11-May-89    0    0    0  403  122  69  3  2    4
ATSI  22-Jun-89
ATSI  05-Oct-89    0    0  <.01  317  101  14  2  6    0
ATSI  13-Jun-90    0    0    2  229  72   7  1  4    1
ATSI  10-Jul-90    0    0    2  344  100  15  2  6    3
ATSI  07-Aug-90
ATSI  11-Sep-90
ATSI  23-Oct-90
ATSI  14-May-91
ATSI  13-Jun-91

```

## **APPENDIX D**

### **Laboratory Data Sheets for Waters Entering the American Tunnel Level of the Sunnyside Mine**

sanjuan\sunny\110361\oct91.Rpt

D - 1

 **SIMON** HYDRO-SEARCH

P.O. BOX 309  
303-387-5492

CLIENT: SJOMV - Sunnyside Mine      REPORT DATE: 3/8/91  
SAMPLE ID: 0700 RA      LAB ID: AT1397  
SAMPLE DATE: 3/5/91      TIME: 11:10  
SAMPLED BY: EB      DATE REC'D: 3/5      ANALYZED: 3/6

Metals Digestion: Total Recoverable

CERTIFIED BY: \_\_\_\_\_ Charges \$ 49.00

P.O. BOX 309  
303-387-5492

CLIENT: SJOMV - Sunnyside Mine      REPORT DATE: 3/8/91  
SAMPLE ID: 21950 P      LAB ID: AT1400  
SAMPLE DATE: 3/5/91      TIME: 9:10 am  
SAMPLED BY: EB      DATE REC'D: 3/5      ANALYZED: 3/6

PARAMETERS	SAMPLE VALUE	% RSD	SPIKE RECOVERY	CONTROL RECOVERY
TEMPERATURE	C.			
pH	2.35 s.u.			
T. SUSPENDED SOLS	65.6 mg/L			
T. DISSOLVED SOLS	mg/L			
CONDUCTIVITY (/cm @ 25 C)	umhos			
T. HARDNESS (as CaCO3-EDTA)	mg/L			
T. LEAD	2.58 mg/L	3.0	%	92 %
T. COPPER	25.1 mg/L	4.1	%	104 %
T. ZINC	566.9 mg/L	0.0	%	100 %
T. CADMIUM	1.50 mg/L	2.5	%	88 %
T. CHROMIUM	mg/L		%	%
T. MANGANESE	840.4 mg/L	0.1	%	96 %
T. IRON	203.0 mg/L	2.1	%	100 %
T. CYANIDE	mg/L		%	%
T. MERCURY	mg/L		%	%

Remarks:

CERTIFIED BY: *[Signature]* Charges \$ 49.00





InterMountain  
Laboratories, Inc.

2506 West Main Street  
Farmington, New Mexico 87401  
Tel. (505) 326-4737

CLIENT: Sunnyside Gold  
ID: 0910  
SITE: 2195 OP  
LAB NO: F5884

DATE REPORTED: 03/27/91  
DATE RECEIVED: 03/07/91  
DATE COLLECTED: 03/05/91

Lab pH (s.u.).....	2.86
Lab conductivity, umhos/cm.....	63200
Lab resistivity, ohm-m.....	0.158
Total dissolved solids (180), mg/l..	9130
Total dissolved solids (calc), mg/l.	7710
Total suspended solids, mg/l.....	8
Total alkalinity as CaCO3, mg/l.....	0
Total acidity as CaCO3, mg/l.....	2730
Total hardness as CaCO3, mg/l.....	5810
Sodium absorption ratio.....	0.056
Total ortho-phosphate, mg/l.....	1.23
Fluoride, mg/l.....	2.47
Total nitrate and nitrite, mg/l.....	47.9
Ammonia, mg/l.....	18.56

	mg/l	meq/l
Bicarbonate as HCO3.....	0	0
Carbonate as CO3.....	0	0
Chloride.....	9.19	0.26
Sulfate.....	5550	116
Calcium.....	1860	92.8
Magnesium.....	285	23.4
Potassium.....	2.09	0.03
Sodium.....	9.8	0.43
Major cations.....		171
Major anions.....		119
Cation/anion difference.....		17.9 %

\*\*Sample rerun, no significant changes.



2606 West Main Street  
Farmington, New Mexico 87401  
Tel. (505) 328-4737

CLIENT: Sunnyside Gold  
ID: 0910  
SITE: 2195 OP  
LAB NO: F5884

DATE REPORTED: 03/28/91  
DATE RECEIVED: 03/07/91  
DATE COLLECTED: 03/05/91

Trace metals by AA (dissolved concentration), mg/l

	Analytical Result:	Detection Limit:
Arsenic (As).....	0.036	<0.0003
Cadmium (Cd).....	2.065	<0.0002
Mercury (Hg).....	ND	<0.001
Lead (Pb).....	1.525	<0.004
Selenium (Se).....	ND	<0.005

Trace metals by ICAP (dissolved concentration), mg/l

	Analytical Result:	Detection Limit:
Silver (Ag).....	ND	<0.01
Aluminum (Al).....	101	<0.1
Gold (Au).....	ND	<0.05
Boron (B).....	ND	<0.01
Chromium (Cr).....	ND	<0.02
Copper (Cu).....	24.8	<0.01
Iron (Fe).....	192	<0.05
Manganese (Mn).....	946	<0.02
Strontium (Sr).....	3.62	<0.05
Zinc (Zn).....	701	<0.01

ND - Analyte "not detected" at the stated detection limit.

\_\_\_\_\_  
Mary Stepp  
Lab Director



2506 West Main Street  
Farmington, New Mexico 87401  
Tel. (505) 328-4737

CLIENT: Sunnyside Gold  
ID: 1110  
SITE: 0700 RA  
LAB NO: F5885

DATE REPORTED: 03/27/91  
DATE RECEIVED: 03/07/91  
DATE COLLECTED: 03/05/91

Trace metals by AA (dissolved concentration), mg/l

	Analytical Result:	Detection Limit:
Arsenic (As).....	ND	<0.005
Cadmium (Cd).....	ND	<0.002
Mercury (Hg).....	ND	<0.001
Lead (Pb).....	0.019	<0.004
Selenium (Se).....	ND	<0.006

Trace metals by ICAP (dissolved concentration), mg/l

	Analytical Result:	Detection Limit:
Silver (Ag).....	ND	<0.01
Aluminum (Al).....	0.1	<0.1
Gold (Au).....	ND	<0.05
Boron (B).....	0.04	<0.01
Chromium (Cr).....	ND	<0.02
Copper (Cu).....	ND	<0.01
Iron (Fe).....	0.31	<0.05
Manganese (Mn).....	1.37	<0.02
Strontium (Sr).....	6.41	<0.05
Zinc (Zn).....	0.92	<0.01

ND - Analyte "not detected" at the stated detection limit.

Mary Stepp  
Lab Director

ROOT & NORTON LABORATORIES  
SILVERTON, COLORADO 81433

P.O. BOX 309  
303-387-5492

CERTIFICATE OF WATER ANALYSIS

CLIENT: SJCMV - Sunnyside Mine  
SAMPLE ID: SS Drift  
SAMPLE DATE: 3/5/91  
SAMPLED BY: EB

REPORT DATE: 3/8/91  
LAB ID: AT1396  
TIME: 10:30  
DATE REC'D: 3/5 ANALYZED: 3/6

PARAMETERS	SAMPLE VALUE	% RSD	SPIKE RECOVERY	CONTROL RECOVERY
TEMPERATURE .....	C.			
pH .....	7.57	S.U.		
T. SUSPENDED SLDS	0.04	mg/L		
T. DISSOLVED SLDS		mg/L		
CONDUCTIVITY .... (/cm @ 25 C)		umhos		
T. HARDNESS .... (as CaCO3-EDTA)		mg/L		
T. LEAD .....	0.18	mg/L	3.8 %	106 %
T. COPPER .....	0.02	mg/L	30.1 %	97 %
T. ZINC .....	0.09	mg/L	17.1 %	92 %
T. CADMIUM .....	0.000	mg/L	%	112 %
T. CHROMIUM .....		mg/L	%	%
T. MANGANESE .....	1.83	mg/L	2.0 %	98 %
T. IRON .....	0.25	mg/L	10.0 %	100 %
T. CYANIDE .....		mg/L	%	%
T. MERCURY .....		mg/L	%	%

Metals Digestion: Total Recoverable

Remarks:

CERTIFIED BY:  Charges \$ 49.00



2506 West Main Street  
Farmington, New Mexico 87401  
Tel. (505) 326-4737

CLIENT: Sunnyside Gold  
ID: 1030  
SITE: SS Drift  
LAB NO: F5883

DATE REPORTED: 03/27/91  
DATE RECEIVED: 03/07/91  
DATE COLLECTED: 03/03/91

Lab pH (s.u.).....	7.60
Lab conductivity, umhos/cm.....	1340
Lab resistivity, ohm-m.....	7.46
Total dissolved solids (180), mg/l..	1280
Total dissolved solids (calc), mg/l.	1140
Total suspended solids, mg/l.....	1
Total alkalinity as CaCO <sub>3</sub> , mg/l.....	82.1
Total hardness as CaCO <sub>3</sub> , mg/l.....	833
Sodium absorption ratio.....	0.194
Total ortho-phosphate, mg/l.....	<0.02
Fluoride, mg/l.....	2.39
Total nitrate and nitrite, mg/l.....	0.17
Ammonia, mg/l.....	<0.02

	mg/l	meq/l
Bicarbonate as HCO <sub>3</sub> .....	100	1.64
Carbonate as CO <sub>3</sub> .....	0	0
Chloride.....	3.06	0.09
Sulfate.....	769	16
Calcium.....	267	13.3
Magnesium.....	40.4	3.32
Potassium.....	1.13	0.03
Sodium.....	12.9	0.56
Major cations.....		17.2
Major anions.....		17.8
Cation/anion difference.....		1.45 %



2606 West Main Street  
Farmington, New Mexico 8740  
Tel. (505) 326-473

CLIENT: Sunnyside Gold  
ID: 1030  
SITE: SS Drift  
LAB NO: F5883

DATE REPORTED: 03/27/91  
DATE RECEIVED: 03/07/91  
DATE COLLECTED: 03/05/91

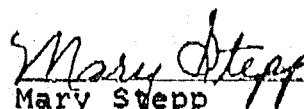
Trace metals by AA (dissolved concentration), mg/l

	Analytical Result:	Detection Limit:
Arsenic (As).....	ND	<0.005
Cadmium (Cd).....	0.003	<0.0002
Mercury (Hg).....	ND	<0.001
Lead (Pb).....	ND	<0.005
Selenium (Se).....	ND	<0.005

Trace metals by ICAP (dissolved concentration), mg/l

	Analytical Result:	Detection Limit:
Silver (Ag).....	ND	<0.01
Aluminum (Al).....	ND	<0.1
Gold (Au).....	ND	<0.05
Boron (B).....	0.06	<0.01
Chromium (Cr).....	ND	<0.02
Copper (Cu).....	ND	<0.01
Iron (Fe).....	0.14	<0.05
Manganese (Mn).....	2.10	<0.02
Strontium (Sr).....	6.03	<0.05
Zinc (Zn).....	0.09	<0.01

ND - Analyte "not detected" at the stated detection limit.

  
Mary Stepp  
Lab Director



2506 West Main Street  
Farmington, New Mexico 87401  
Tel. (505) 326-4737

CLIENT: Sunnyside Gold  
ID: 1250  
SITE: SS Drift  
LAB NO: F5910

DATE REPORTED: 04/11/91  
DATE RECEIVED: 03/18/91  
DATE COLLECTED: 03/13/91

Lab pH (s.u.).....	7.18
Lab conductivity, umhos/cm.....	1430
Lab resistivity, ohm-m.....	7.02
Total dissolved solids (180), mg/l..	1250
Total dissolved solids (calc), mg/l.	1130
Total suspended solids, mg/l.....	1
Total alkalinity as CaCO3, mg/l.....	94
Total hardness as CaCO3, mg/l.....	843
Sodium absorption ratio.....	0.178
Total ortho-phosphate, mg/l.....	<0.02
Fluoride, mg/l.....	1.79
Total nitrate and nitrite, mg/l.....	0.12
Ammonia, mg/l.....	<0.02

	mg/l	meq/l
Bicarbonate as HCO3.....	98.2	1.61
Carbonate as CO3.....	0	0
Chloride.....	1.02	0.03
Sulfate.....	766	16
Calcium.....	252	12.6
Magnesium.....	52.1	4.29
Potassium.....	1.03	0.03
Sodium.....	11.9	0.52
Major cations.....		17.4
Major anions.....		17.6
Cation/anion difference.....		0.61 %



Inter-Mountain  
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2506 West Main Street  
Farmington, New Mexico 87401  
Tel. (505) 326-4737

CLIENT: Sunnyside Gold  
ID: 1250  
SITE: SS Drift  
LAB NO: F5910

DATE REPORTED: 04/11/91  
DATE RECEIVED: 03/18/91  
DATE COLLECTED: 03/13/91

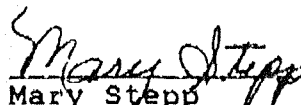
Trace metals by AA (dissolved concentration), mg/l

	Analytical Result:	Detection Limit:
Arsenic (As).....	ND	<0.005
Cadmium (Cd).....	ND	<0.002
Mercury (Hg).....	ND	<0.001
Lead (Pb).....	ND	<0.005
Selenium (Se).....	ND	<0.005

Trace metals by ICAP (dissolved concentration), mg/l

	Analytical Result:	Detection Limit:
Silver (Ag).....	ND	<0.01
Aluminum (Al).....	ND	<0.1
Gold (Au).....	ND	<0.05
Boron (B).....	0.03	<0.01
Chromium (Cr).....	ND	<0.02
Copper (Cu).....	ND	<0.01
Iron (Fe).....	ND	<0.05
Manganese (Mn).....	1.87	<0.02
Strontium (Sr).....	5.78	<0.05
Zinc (Zn).....	0.06	<0.01

ND - Analyte "not detected" at the stated detection limit.

  
Mary Stepp  
Lab Director



ROOT & HORTON LABORATORIES  
SILVERTON, COLORADO 81433

P.O. BOX 309  
303-387-5492

### CERTIFICATE OF WATER ANALYSIS

CLIENT: SJCMV - Sunnyside Mine  
SAMPLE ID: SS Drift  
SAMPLE DATE: 3/13/91 TIME: 12:50  
SAMPLED BY: EB

REPORT DATE: 3/18/91  
LAB ID: AT1419

DATE REC'D: 3/13 ANALYZED: 3/14

PARAMETERS	SAMPLE VALUE	% RSD	SPIKE RECOVERY	CONTROL RECOVERY
TEMPERATURE .....	C.			
pH .....	7.60 s.u.			
T. SUSPENDED SLDS	0.00 mg/L			
T. DISSOLVED SLDS	mg/L			
CONDUCTIVITY .... (/cm @ 25 C)	umhos			
T. HARDNESS .... (as CaCO3-EDTA)	mg/L			
T. LEAD .....	0.08 mg/L	12.0	% 91 %	106 %
T. COPPER .....	< 0.01 mg/L	na	% 96 %	93 %
T. ZINC .....	0.07 mg/L	3.4	% 90 %	94 %
T. CADMIUM .....	0.004 mg/L	40.0	% 78 %	92 %
T. CHROMIUM .....	mg/L		% %	%
T. MANGANESE .....	1.94 mg/L	0.6	% 98 %	97 %
T. IRON .....	0.18 mg/L	3.9	% 87 %	90 %
T. CYANIDE .....	mg/L		% %	%
T. MERCURY .....	mg/L		% %	%

Metals Digestion: Total Recoverable

Remarks:

CERTIFIED BY: Pat All Charges \$ 49.00

ROOT & NORTON LABORATORIES  
SILVERTON, COLORADO 81433

P.O. BOX 309  
303-387-5492

# CERTIFICATE OF WATER ANALYSIS

CLIENT: SJCMV - Sunnyside Mine

REPORT DATE: 3/8/91

SAMPLE ID: W. 13H HW

LAB ID: AT14.3

SAMPLE DATE: 3/5/91

TIME: 7:55 am

SAMPLED BY: EB

DATE REC'D: 3/5 ANALYZED: 3/6

PARAMETERS	SAMPLE VALUE		% RSD	SPIKE RECOVERY		CONTROL RECOVERY	
TEMPERATURE .....		C.					
PH .....	7.18	s.u.					
T. SUSPENDED SOLDS	1.22	mg/L					
T. DISSOLVED SOLDS		mg/L					
CONDUCTIVITY .... (/cm @ 25 C)		umhos					
T. HARDNESS .... (as CaCO3-EDTA)		mg/L					
T. LEAD .....	0.19	mg/L	9.4	%	%	92	%
T. COPPER .....	0.03	mg/L	9.7	%	%	101	%
T. ZINC .....	0.59	mg/L	3.6	%	%	92	%
T. CADMIUM .....	0.005	mg/L	20.8	%	%	104	%
T. CHROMIUM .....		mg/L		%	%		%
T. MANGANESE.....	1.58	mg/L	2.2	%	%	103	%
T. IRON .....	0.17	mg/L	11.3	%	%	95	%
T. CYANIDE .....		mg/L		%	%		%
T. MERCURY .....		mg/L		%	%		%

Metals Digestion: Total Recoverable

Remarks:

CERTIFIED BY: *[Signature]* Charges \$ 49.00



Inter-Mountain  
Laboratories, Inc.

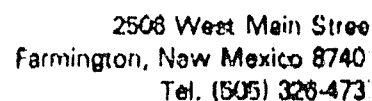
2506 West Main Street  
Farmington, New Mexico 87401  
Tel. (505) 328-4737

CLIENT: Sunnyside Gold  
ID: 0755  
SITE: Wash HW  
LAB NO: F5881

DATE REPORTED: 03/28/91  
DATE RECEIVED: 03/07/91  
DATE COLLECTED: 03/05/91

Lab pH (s.u.).....	7.54
Lab conductivity, umhos/cm.....	1860
Lab resistivity, ohm-m.....	5.37
Total dissolved solids (180), mg/l..	1970
Total dissolved solids (calc), mg/l.	1710
Total suspended solids, mg/l.....	<1.0
Total alkalinity as CaCO <sub>3</sub> , mg/l.....	65
Total hardness as CaCO <sub>3</sub> , mg/l.....	1270
Sodium absorption ratio.....	0.181
Total ortho-phosphate, mg/l.....	<0.02
Fluoride, mg/l.....	2.47
Total nitrate and nitrite, mg/l.....	<0.04
Ammonia, mg/l.....	<0.02

	mg/l	meq/l
Bicarbonate as HCO <sub>3</sub> .....	79.3	1.3
Carbonate as CO <sub>3</sub> .....	0	0
Chloride.....	4.08	0.12
Sulfate.....	1220	25.4
Calcium.....	310	15.5
Magnesium.....	121	9.91
Potassium.....	1.17	0.03
Sodium.....	14.8	0.64
Major cations.....		26
Major anions.....		25.9
Cation/anion difference.....		1.54 %



DATE REPORTED: 03/27/91  
DATE RECEIVED: 03/07/91  
DATE COLLECTED: 03/05/91

Trace metals by ICAP (dissolved concentration), mg/l		
	Analytical Result:	Detection Limit:
Silver (Ag).....	ND	<0.01
Aluminum (Al).....	ND	<0.1
Gold (Au).....	ND	<0.05
Boron (B).....	0.06	<0.01
Chromium (Cr).....	ND	<0.02
Copper (Cu).....	ND	<0.01
Iron (Fe).....	0.07	<0.05
Manganese (Mn).....	2.01	<0.02
Strontium (Sr).....	7.54	<0.05
Zinc (Zn).....	0.75	<0.01

Mary Stepp  
Mary Stepp  
Lab Director



Inter-Mountain  
Laboratories, Inc.

2506 West Main Street  
Farmington, New Mexico 87401  
Tel. (505) 326-4737

CLIENT: Sunnyside Gold  
ID: 1310  
SITE: Wash HW  
LAB NO: F5909

DATE REPORTED: 04/10/91  
DATE RECEIVED: 03/18/91  
DATE COLLECTED: 03/13/91

Lab pH (s.u.).....	7.17
Lab conductivity, umhos/cm.....	1990
Lab resistivity, ohm-m.....	5.03
Total dissolved solids (180), mg/l..	1920
Total dissolved solids (calc), mg/l.	1650
Total suspended solids, mg/l.....	2
Total alkalinity as CaCO <sub>3</sub> , mg/l.....	59.8
Total hardness as CaCO <sub>3</sub> , mg/l.....	1250
Sodium absorption ratio.....	0.185
Total ortho-phosphate, mg/l.....	<0.02
Fluoride, mg/l.....	2.27
Total nitrate and nitrite, mg/l.....	<0.04
Ammonia, mg/l.....	<0.02

	mg/l	meq/l
Bicarbonate as HCO <sub>3</sub> .....	73.2	1.2
Carbonate as CO <sub>3</sub> .....	0	0
Chloride.....	2.04	0.06
Sulfate.....	1230	25.5
Calcium.....	174	8.7
Magnesium.....	198	16.3
Potassium.....	1.11	0.03
Sodium.....	15	0.65
Major cations.....		25.7
Major anions.....		26.8
Cation/anion difference.....		2.17 %



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Laboratories, Inc.

2506 West Main Street  
Farmington, New Mexico 87401  
Tel. (505) 326-4737

CLIENT: Sunnyside Gold  
ID: 1310  
SITE: Wash HW  
LAB NO: F5909

DATE REPORTED: 04/10/91  
DATE RECEIVED: 03/18/91  
DATE COLLECTED: 03/13/91

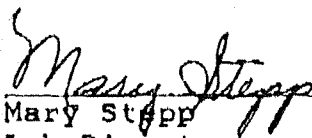
Trace metals by AA (dissolved concentration), mg/l

	Analytical Result:	Detection Limit:
Arsenic (As).....	ND	<0.005
Cadmium (Cd).....	ND	<0.002
Mercury (Hg).....	ND	<0.001
Lead (Pb).....	ND	<0.005
Selenium (Se).....	ND	<0.005

Trace metals by ICAP (dissolved concentration), mg/l

	Analytical Result:	Detection Limit:
Silver (Ag).....	ND	<0.01
Aluminum (Al).....	ND	<0.1
Gold (Au).....	ND	<0.05
Boron (B).....	0.05	<0.01
Chromium (Cr).....	ND	<0.02
Copper (Cu).....	ND	<0.01
Iron (Fe).....	0.06	<0.05
Manganese (Mn).....	2.21	<0.02
Strontium (Sr).....	7.29	<0.05
Zinc (Zn).....	0.98	<0.01

ND - Analyte "not detected" at the stated detection limit.

  
Mary Stepp  
Lab Director

ROOT & HORTON LABORATORIES  
SILVERTON, COLORADO 81433

P.O. BOX 309  
303-387-5492

# CERTIFICATE OF WATER ANALYSIS

CLIENT: SJCMV - Sunnyside Mine

REPORT DATE: 3/18/91

SAMPLE ID: WASH HW

LAB ID: AT1417

SAMPLE DATE: 3/13/91 TIME: 1:10

SAMPLED BY: EB

DATE REC'D: 3/13 ANALYZED: 3/14

PARAMETERS	SAMPLE VALUE	% RSD	SPIKE RECOVERY	CONTROL RECOVERY
TEMPERATURE .....	C.			
pH .....	7.53	s.u.		
T. SUSPENDED SLDS	0.22	mg/L		
T. DISSOLVED SLDS		mg/L		
CONDUCTIVITY .... (/cm @ 25 C)		umhos		
T. HARDNESS .... (as CaCO <sub>3</sub> -EDTA)		mg/L		
T. LEAD .....	0.15	mg/L	20.0 %	98 % 106 %
T. COPPER .....	0.02	mg/L	50.0 %	85 % 93 %
T. ZINC .....	0.95	mg/L	1.0 %	100 % 106 %
T. CADMIUM .....	0.002	mg/L	24.0 %	98 % 92 %
T. CHROMIUM .....		mg/L	%	% %
T. MANGANESE .....	2.18	mg/L	0.5 %	105 % 97 %
T. IRON .....	0.22	mg/L	2.3 %	89 % 90 %
T. CYANIDE .....		mg/L	%	% %
T. MERCURY .....		mg/L	%	% %

Metals Digestion: Total Recoverable

Remarks:

CERTIFIED BY: *P. H. H. H.* Charges \$ 49.00



2508 West Main Street  
Farmington, New Mexico 87401  
Tel. (505) 326-4737

CLIENT: Sunnyside Gold  
ID: 0945  
SITE: West Drift  
LAB NO: F5880

DATE REPORTED: 03/27/91  
DATE RECEIVED: 03/07/91  
DATE COLLECTED: 03/05/91

Lab pH (s.u.).....	6.71
Lab conductivity, umhos/cm.....	1740
Lab resistivity, ohm-m.....	5.73
Total dissolved solids (180), mg/l..	1820
Total dissolved solids (calc), mg/l.	1670
Total suspended solids, mg/l.....	56
Total alkalinity as CaCO <sub>3</sub> , mg/l.....	51.3
Total hardness as CaCO <sub>3</sub> , mg/l.....	1240
Sodium absorption ratio.....	0.073
Total ortho-phosphate, mg/l.....	0.02
Fluoride, mg/l.....	7.08
Total nitrate and nitrite, mg/l.....	<0.04
Ammonia, mg/l.....	0.06

	mg/l	meq/l
Bicarbonate as HCO <sub>3</sub> .....	62.8	1.03
Carbonate as CO <sub>3</sub> .....	0	0
Chloride.....	4.08	0.12
Sulfate.....	1150	24
Calcium.....	434	21.6
Magnesium.....	38.2	3.15
Potassium.....	0.81	0.02
Sodium.....	5.9	0.26
Major cations.....		25.1
Major anions.....		25.1
Cation/anion difference.....		0.14 %





2506 West Main Street  
Farmington, New Mexico 87401  
Tel. (505) 328-4737

CLIENT: Sunnyside Gold  
ID: 0945  
SITE: West Drift  
LAB NO: F5880

DATE REPORTED: 03/28/91  
DATE RECEIVED: 03/07/91  
DATE COLLECTED: 03/05/91

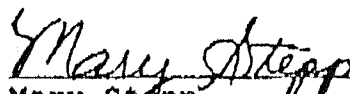
Trace metals by AA (dissolved concentration), mg/l

	Analytical Result:	Detection Limit:
Arsenic (As).....	ND	<0.005
Cadmium (Cd).....	0.082	<0.0002
Mercury (Hg).....	ND	<0.001
Lead (Pb).....	ND	<0.005
Selenium (Se).....	ND	<0.005

Trace metals by ICAP (dissolved concentration), mg/l

	Analytical Result:	Detection Limit:
Silver (Ag).....	ND	<0.01
Aluminum (Al).....	0.5	<0.1
Gold (Au).....	ND	<0.05
Boron (B).....	ND	<0.05
Chromium (Cr).....	ND	<0.02
Copper (Cu).....	ND	<0.01
Iron (Fe).....	5.47	<0.05
Manganese (Mn).....	17.7	<0.02
Strontium (Sr).....	4.68	<0.05
Zinc (Zn).....	17.9	<0.01

ND - Analyte "not detected" at the stated detection limit.

  
Mary Stepp  
Lab Director

ROOT & NORTON LABORATORIES  
SILVERTON, COLORADO 81433

P.O. BOX 309  
303-387-5492

CERTIFICATE OF WATER ANALYSIS

CLIENT: SJCMV - Sunnyside Mine

REPORT DATE: 3/8/91

SAMPLE ID: West Drift

LAB ID: AT1398

SAMPLE DATE: 3/5/91 TIME: 9:45 am

SAMPLED BY: EB

DATE REC'D: 3/5 ANALYZED: 3/6

PARAMETERS	SAMPLE VALUE	% RSD	SPIKE RECOVERY	CONTROL RECOVERY
TEMPERATURE .....	C.			
pH .....	6.73 s.u.			
T. SUSPENDED SLDS	70.7 mg/L			
T. DISSOLVED SLDS	mg/L			
CONDUCTIVITY .... (/cm @ 25 C)	umhos			
T. HARDNESS .... (as CaCO3-EDTA)	mg/L			
T. LEAD .....	0.24 mg/L	12.6 %	%	91 %
T. COPPER .....	0.205 mg/L	3.1 %	%	104 %
T. ZINC .....	16.70 mg/L	4.5 %	%	100 %
T. CADMIUM .....	0.106 mg/L	1.1 %	%	79 %
T. CHROMIUM .....	mg/L	%	%	%
T. MANGANESE .....	18.65 mg/L	0.9 %	%	103 %
T. IRON .....	15.5 mg/L	1.6 %	%	92 %
T. CYANIDE .....	mg/L	%	%	%
T. MERCURY .....	mg/L	%	%	%

Metals Digestion: Total Recoverable

Remarks:

CERTIFIED BY: 

Charges \$ 49.00

ROOT & NORTON LABORATORIES  
SILVERTON, COLORADO 81433

P.O. BOX 309  
303-387-5492

### CERTIFICATE OF WATER ANALYSIS

CLIENT: SJCMV - Sunnyside Mine

REPORT DATE: 3/8/91

SAMPLE ID: Wash FW

LAB ID: AT1399

SAMPLE DATE: 3/5/91 TIME: 8:50 am

SAMPLED BY: EB

DATE REC'D: 3/5 ANALYZED: 3/6

PARAMETERS	SAMPLE VALUE	% RSD	SPIKE RECOVERY	CONTROL RECOVERY
TEMPERATURE .....	C.			
pH .....	7.68 S.U.			
T. SUSPENDED SLDS	5.62 mg/L			
T. DISSOLVED SLDS	mg/L			
CONDUCTIVITY .... (/cm @ 25 C)	umhos			
T. HARDNESS .... (as CaCO3-EDTA)	mg/L			
T. LEAD .....	0.21 mg/L	10.1	%	91 %
T. COPPER .....	0.13 mg/L	5.4	%	101 %
T. ZINC .....	33.43 mg/L	3.1	%	100 %
T. CADMIUM .....	0.090 mg/L	4.9	%	79 %
T. CHROMIUM .....	mg/L		%	%
T. MANGANESE.....	64.29 mg/L	1.1	%	92 %
T. IRON .....	0.38 mg/L	6.2	%	102 %
T. CYANIDE .....	mg/L		%	%
T. MERCURY .....	mg/L		%	%

Metals Digestion: Total Recoverable

Remarks:

CERTIFIED BY:  Charges \$ 49.00



2506 West Main Street  
Farmington, New Mexico 87401  
Tel. (505) 326-4737

CLIENT: Sunnyside Gold  
ID: 0850  
SITE: Wash FW  
LAB NO: F5882

DATE REPORTED: 03/28/91  
DATE RECEIVED: 03/07/91  
DATE COLLECTED: 03/05/91

Lab pH (s.u.).....	7.24
Lab conductivity, umhos/cm.....	1850
Lab resistivity, ohm-m.....	5.4
Total dissolved solids (180), mg/l..	1840
Total dissolved solids (calc), mg/l.	1700
Total suspended solids, mg/l.....	1
Total alkalinity as CaCO <sub>3</sub> , mg/l.....	133
Total hardness as CaCO <sub>3</sub> , mg/l.....	1270
Sodium absorption ratio.....	0.076
Total ortho-phosphate, mg/l.....	<0.02
Fluoride, mg/l.....	4.19
Total nitrate and nitrite, mg/l.....	0.04
Ammonia, mg/l.....	0.06

	mg/l	meq/l
Bicarbonate as HCO <sub>3</sub> .....	163	2.67
Carbonate as CO <sub>3</sub> .....	0	0
Chloride.....	4.08	0.12
Sulfate.....	1130	23.5
Calcium.....	430	21.5
Magnesium.....	47.7	3.92
Potassium.....	1.44	0.04
Sodium.....	6.2	0.27
Major cations.....		25.7
Major anions.....		26.3
Cation/anion difference.....		1.25 %



InterMountain  
Laboratories, Inc.

2506 West Main Street  
Farmington, New Mexico 87401  
Tel. (505) 328-4737

CLIENT: Sunnyside Gold  
ID: 0850  
SITE: Wash FW  
LAB NO: F5862

DATE REPORTED: 03/28/91  
DATE RECEIVED: 03/07/91  
DATE COLLECTED: 03/06/91

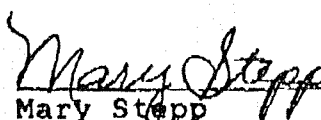
Trace metals by AA (dissolved concentration), mg/l

	Analytical Result:	Detection Limit:
Arsenic (As).....	ND	<0.005
Cadmium (Cd).....	0.073	<0.0002
Mercury (Hg).....	ND	<0.001
Lead (Pb).....	ND	<0.005
Selenium (Se).....	ND	<0.005

Trace metals by ICAP (dissolved concentration), mg/l

	Analytical Result:	Detection Limit:
Silver (Ag).....	ND	<0.01
Aluminum (Al).....	0.2	<0.1
Gold (Au).....	ND	<0.05
Boron (B).....	0.06	<0.01
Chromium (Cr).....	ND	<0.02
Copper (Cu).....	ND	<0.01
Iron (Fe).....	ND	<0.05
Manganese (Mn).....	61.9	<0.02
Strontium (Sr).....	3.99	<0.05
Zinc (Zn).....	34.3	<0.01

ND - Analyte "not detected" at the stated detection limit.

  
Mary Stepp  
Lab Director

1 10/31/91

Water Analysis Report

16:08 1

Page 1

Client : Sunnyside Mine  
Address : #1 Cladstone  
Silverton, CO 81433  
Attn. : Mr. E. Bingham

Project :

Sample Matrix:

Sample ID: Ross Basin Seep

Sample Date Time: 10/17/91 15:00

RECEIVED  
NOV 07 1991  
HYDROSEARCH, INC-RENO

Lab No. : 91-WI/09316

Date Received: 10/21/91

Parameters

Cadmium, dissolved	- .005	mg/l
Copper, dissolved	- .01	mg/l
Iron, dissolved	.15	mg/l
Lead, dissolved	.04	mg/l
Manganese, dissolved	.44	mg/l
Zinc, dissolved	.44	mg/l

Remarks:

Note: Negative sign "-" denotes that the value is less than "<"

Frank E. Polniak, Inorganic Lab Supervisor

*Ralph V. Poulsen for FP*

P.O. BOX 309  
303-387-5492

CLIENT: SJCMV - Sunnyside Mine                      REPORT DATE: 3/8/91  
SAMPLE ID: Fault #1                                  LAB ID: AT1401  
SAMPLE DATE: 3/5/91            TIME: 11:35 am  
SAMPLED BY: EB                 DATE REC'D: 3/5   ANALYZED: 3/6

PARAMETERS	SAMPLE VALUE		% RSD	SPIKE RECOVERY		CONTROL RECOVERY		
TEMPERATURE .....		C.						
pH .....	5.90	s.u.						
T. SUSPENDED SOLDS	4.78	mg/L						
T. DISSOLVED SOLDS		mg/L						
CONDUCTIVITY .... (/cm @ 25 C)		umhos						
T. HARDNESS .... (as CaCO3-EDTA)		mg/L						
T. LEAD .....	0.21	mg/L	7.6	%	107	%	92	%
T. COPPER .....	0.34	mg/L	3.7	%	92	%	104	%
T. ZINC .....	47.08	mg/L	1.0	%		%	100	%
T. CADMIUM .....	0.064	mg/L	12.6	%		%	104	%
T. CHROMIUM .....		mg/L		%		%		%
T. MANGANESE.....	91.4	mg/L		%		%		%
T. IRON .....	344.0	mg/L	1.1	%		%	100	%
T. CYANIDE .....		mg/L		%		%		%
T. MERCURY .....		mg/L		%		%		%

Remarks:

CERTIFIED BY: 2 Charges \$ 49.00

P.O. BOX 309  
303-387-5492

CLIENT: SJCMV - Sunnyside Mine      REPORT DATE: 3/8/91  
SAMPLE ID: Fault #2      LAB ID: AT1402  
SAMPLE DATE: 3/5/91      TIME: 11:50 am  
SAMPLED BY: EB      DATE REC'D: 3/5      ANALYZED: 3/6

PARAMETERS	SAMPLE VALUE		% RSD	SPIKE RECOVERY		CONTROL RECOVERY	
TEMPERATURE . . . . .		C.					
pH . . . . .	6.05	s.u.					
T. SUSPENDED SOLDS	4.88	mg/L					
T. DISSOLVED SOLDS		mg/L					
CONDUCTIVITY . . . . (/cm @ 25 C)		umhos					
T. HARDNESS . . . . (as CaCO3-EDTA)		mg/L					
T. LEAD . . . . .	0.59	mg/L	6.4	%	%	94	%
T. COPPER . . . . .	0.03	mg/L	10.5	%	%	101	%
T. ZINC . . . . .	70.1	mg/L	1.2	%	%	100	%
T. CADMIUM . . . . .	0.106	mg/L	9.1	%	%	104	%
T. CHROMIUM . . . . .		mg/L		%	%		%
T. MANGANESE . . . . .	132.6	mg/L	0.0	%	%		%
T. IRON . . . . .	531.0	mg/L	0.9	%	%	103	%
T. CYANIDE . . . . .		mg/L		%	%		%
T. MERCURY . . . . .		mg/L		%	%		%

Remarks:

CERTIFIED BY: *[Signature]* Charges \$ 49.00





2608 West Main Street  
Farmington, New Mexico 87401  
Tel. (505) 326-4737

CLIENT: Sunnyside Gold  
ID: 1150  
SITE: Fault #2  
LAB NO: F5879

DATE REPORTED: 03/28/91  
DATE RECEIVED: 03/07/91  
DATE COLLECTED: 03/05/91

Trace metals by AA (dissolved concentration), mg/l

Analytical Result:	Detection Limit:
Arsenic (As).....	ND
Cadmium (Cd).....	0.089
Mercury (Hg).....	ND
Lead (Pb).....	0.425
Selenium (Se).....	ND

Arsenic (As).....	ND	<0.005
Cadmium (Cd).....	0.089	<0.0002
Mercury (Hg).....	ND	<0.001
Lead (Pb).....	0.425	<0.004
Selenium (Se).....	ND	<0.005

Trace metals by ICAP (dissolved concentration), mg/l

Analytical Result:	Detection Limit:
Silver (Ag).....	ND
Aluminum (Al).....	22.3
Gold (Au).....	ND
Boron (B).....	ND
Chromium (Cr).....	ND
Copper (Cu).....	ND
Iron (Fe).....	537.
Manganese (Mn).....	151.
Strontium (Sr).....	5.89
Zinc (Zn).....	92.1

Silver (Ag).....	ND	<0.01
Aluminum (Al).....	22.3	<0.1
Gold (Au).....	ND	<0.05
Boron (B).....	ND	<0.01
Chromium (Cr).....	ND	<0.02
Copper (Cu).....	ND	<0.01
Iron (Fe).....	537.	<0.05
Manganese (Mn).....	151.	<0.02
Strontium (Sr).....	5.89	<0.05
Zinc (Zn).....	92.1	<0.01

ND - Analyte "not detected" at the stated detection limit.

*Mary Stepp*  
Mary Stepp  
Lab Director

Client: Sunnyside Gold Corp.

Date of report: 10/28/91

Site: ATINFL -ATO  
IML #: F7491


Date received: 10/07/91

Date sampled: 10/02/91

Time sampled: 1035

	Result:	Date analyzed
Lab pH.....	5.56	10/14/91
Total dissolved solids (180), mg/L..	1914	10/15/91
Total suspended solids, mg/L.....	83	10/09/91
Total cadmium, mg/L.....	0.22	
Total copper, mg/L.....	0.22	
Total lead, mg/L.....	<0.005	
Total mercury, mg/L.....	<0.0002	
Total zinc, mg/L.....	13.2	
Total iron, mg/L.....	35.0	
Total manganese, mg/L.....	20.2	

\* TSS reanalyzed on the same day 76 mg/L.

  
Mary Stepp  
Lab Director  
Wanda Orso  
Water Lab Supervisor

Client: Sunnyside Gold Corp.

Date of report: 10/28/91

Site: AT 2400

Date received: 10/07/91

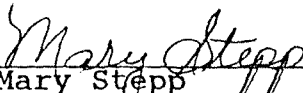
IML #: F7490


Date sampled: 10/02/91

Time sampled: 1145

	Result:	Date analyzed
Lab pH.....	5.56	10/14/91
Total dissolved solids (180), mg/L..	1960	10/15/91
Total suspended solids, mg/L.....	87	10/09/91
Total cadmium, mg/L.....	0.06	
Total copper, mg/L.....	0.22	
Total lead, mg/L.....	<0.005	
Total mercury, mg/L.....	<0.0002	
Total zinc, mg/L.....	14.4	
Total iron, mg/L.....	39.8	
Total manganese, mg/L.....	22.2	

\* TSS reanalyzed on the same day 91 mg/L.

  
Mary Stepp  
Lab Director

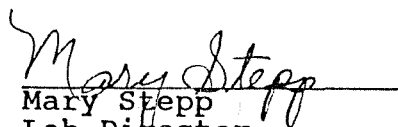

  
Wanda Orso  
Water Lab Supervisor

Client: Sunnyside Gold Corp.

Site: AT 2700  
IML #: F7489Date of report: 10/28/91  
Date received: 10/07/91  
Date sampled: 10/02/91  
Time sampled: 1220

	Result:	Date analyzed
Lab pH.....	5.68	10/14/91
Total dissolved solids (180), mg/L..	1932	10/15/91
Total suspended solids, mg/L.....	92	10/09/91
Total cadmium, mg/L.....	0.066	
Total copper, mg/L.....	0.24	
Total lead, mg/L.....	<0.005	
Total mercury, mg/L.....	<0.0002	
Total zinc, mg/L.....	14.4	
Total iron, mg/L.....	39.8	
Total manganese, mg/L.....	22.2	

\* TSS reanalyzed on the same day 90 mg/L.

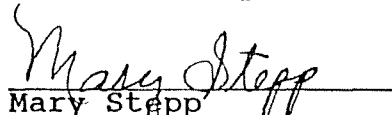

  
Mary Stepp  
Lab Director  
Wanda Orso  
Water Lab Supervisor

Client: Sunnyside Gold Corp.

Site: AT 3450  
IML #: F7488Date of report: 10/28/91  
Date received: 10/07/91  
Date sampled: 10/02/91  
Time sampled: 1425

	Result:	Date analyzed
Lab pH.....	7.17	10/14/91
Total dissolved solids (180), mg/L..	1790	10/15/91
Total suspended solids, mg/L.....	34	10/09/91
Total cadmium, mg/L.....	0.70	
Total copper, mg/L.....	0.30	
Total lead, mg/L.....	<0.005	
Total mercury, mg/L.....	<0.0002	
Total zinc, mg/L.....	12.2	
Total iron, mg/L.....	10.7	
Total manganese, mg/L.....	17.1	

\* TSS reanalyzed on the same day 30 mg/L.

  
Mary Stepp  
Lab Director  
Wanda Orso  
Water Lab Supervisor

Client: Sunnyside Gold Corp.

Site: AT 6400

IML #: F7486

Date of report: 10/28/91

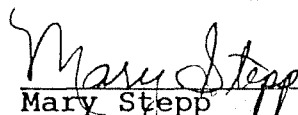
Date received: 10/07/91


Date sampled: 10/02/91

Time sampled: 1515

	Result:	Date analyzed
Lab pH.....	7.23	10/14/91
Total dissolved solids (180), mg/L..	1780	10/15/91
Total suspended solids, mg/L.....	31	10/09/91
Total cadmium, mg/L.....	0.074	
Total copper, mg/L.....	0.32	
Total lead, mg/L.....	<0.005	
Total mercury, mg/L.....	<0.0002	
Total zinc, mg/L.....	11.6	
Total iron, mg/L.....	5.12	
Total manganese, mg/L.....	16.0	

\* TSS reanalyzed on the same day 31 mg/L.

  
Mary Stepp  
Lab Director

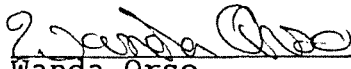
  
Wanda Orso  
Water Lab Supervisor

Client: Sunnyside Gold Corp.

Site: AT 7350  
IML #: F7487Date of report: 10/28/91  
Date received: 10/07/91  
Date sampled: 10/02/91  
Time sampled: 1600

	Result:	Date analyzed
Lab pH.....	7.15	10/14/91
Total dissolved solids (180), mg/L..	1724	10/15/91
Total suspended solids, mg/L.....	20	10/09/91
Total cadmium, mg/L.....	0.088	
Total copper, mg/L.....	0.42	
Total lead, mg/L.....	<0.005	
Total mercury, mg/L.....	<0.0002	
Total zinc, mg/L.....	16.4	
Total iron, mg/L.....	7.06	
Total manganese, mg/L.....	21.8	

\* TSS reanalyzed on the same day 20 mg/L.


  
Mary Stepp  
Lab Director  
Wanda Orso  
Water Lab Supervisor

Client: Sunnyside Gold Corp.

Site: TT002  
IML #: F7492Date of report: 10/28/91  
Date received: 10/07/91  
Date sampled: 10/03/91  
Time sampled: 0915

	Result:	Date analyzed
Lab pH.....	6.42	10/14/91
Total dissolved solids (180), mg/L..	994	10/15/91
Total suspended solids, mg/L.....	20	10/09/91
Total cadmium, mg/L.....	0.0073	
Total copper, mg/L.....	0.05	
Total lead, mg/L.....	0.006	
Total mercury, mg/L.....	<0.0002	
Total zinc, mg/L.....	0.53	
Total iron, mg/L.....	0.31	
Total manganese, mg/L.....	18.82	
Total silver, mg/L.....	<0.01	
Dissolved cadmium, mg/L.....	0.0049	
Dissolved copper, mg/L.....	0.03	
Dissolved lead, mg/L.....	<0.005	
Dissolved mercury, mg/L.....	<0.0002	
Dissolved zinc, mg/L.....	0.42	
Dissolved iron, mg/L.....	0.28	
Dissolved manganese, mg/L.....	6.14	
Dissolved silver, mg/L.....	<0.01	

\* TSS reanalyzed on the same day 19 mg/L.

  
Mary Stepp  
Lab Director  
Wanda Orso  
Water Lab Supervisor



Client: Sunnyside Gold Corp.

Site: AT8150DH  
IML #: F7485Date of report: 10/28/91  
Date received: 10/07/91  
Date sampled: 10/03/91  
Time sampled: 1145

	Result:	Date analyzed
Lab pH.....	6.96	10/14/91
Total dissolved solids (180), mg/L..	1716	10/15/91
Total suspended solids, mg/L.....	34	10/09/91
Total cadmium, mg/L.....	0.102	
Total copper, mg/L.....	0.52	
Total lead, mg/L.....	<0.005	
Total mercury, mg/L.....	<0.0002	
Total zinc, mg/L.....	18.6	
Total iron, mg/L.....	8.62	
Total manganese, mg/L.....	26.0	

\* TSS reanalyzed on the same day 34 mg/L.

  
Mary Stepp  
Lab Director  
Wanda Orso  
Water Lab Supervisor

Client: Sunnyside Gold Corp.

Date of report: 10/28/91

Site: AT HW 5  
IML #: F7484

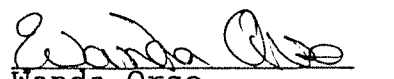
Date received: 10/07/91

Date sampled: 10/03/91

Time sampled: 1335

	Result:	Date analyzed
Lab pH.....	7.58	10/14/91
Total dissolved solids (180), mg/L..	1918	10/15/91
Total suspended solids, mg/L.....	3	10/09/91
Total cadmium, mg/L.....	0.0023	
Total copper, mg/L.....	0.01	
Total lead, mg/L.....	<0.005	
Total mercury, mg/L.....	<0.0002	
Total zinc, mg/L.....	1.30	
Total iron, mg/L.....	0.36	
Total manganese, mg/L.....	2.96	

\* TSS reanalyzed on the same day 4 mg/L.

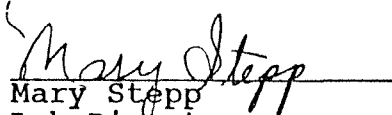
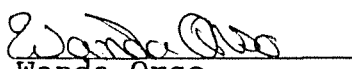
  
Mary Stepp  
Lab Director  
Wanda Orso  
Water Lab Supervisor

Client: Sunnyside Gold Corp.

Site: AT West 4  
IML #: F7481Date of report: 10/28/91  
Date received: 10/07/91  
Date sampled: 10/03/91  
Time sampled: 1515

	Result:	Date analyzed
Lab pH.....	6.64	10/14/91
Total dissolved solids (180), mg/L..	1762	10/15/91
Total suspended solids, mg/L.....	76	10/09/91
Total cadmium, mg/L.....	0.126	
Total copper, mg/L.....	0.14	
Total lead, mg/L.....	<0.005	
Total mercury, mg/L.....	<0.0002	
Total zinc, mg/L.....	18.6	
Total iron, mg/L.....	18.6	
Total manganese, mg/L.....	19.1	

\* TSS reanalyzed on the same day 64 mg/L.

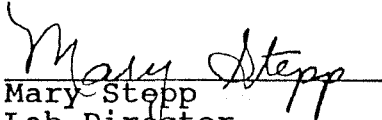
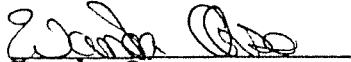
  
Mary Stepp  
Lab Director  
Wanda Orso  
Water Lab Supervisor

Client: Sunnyside Gold Corp.

Site: AT FW 4  
IML #: F7482Date of report: 10/28/91  
Date received: 10/07/91  
Date sampled: 10/03/91  
Time sampled: 1430

	Result:	Date analyzed
Lab pH.....	2.94	10/14/91
Total dissolved solids (180), mg/L..	4680	10/15/91
Total suspended solids, mg/L.....	144	10/09/91
Total cadmium, mg/L.....	1.42	
Total copper, mg/L.....	12.80	
Total lead, mg/L.....	<0.005	
Total mercury, mg/L.....	<0.0002	
Total zinc, mg/L.....	347.8	
Total iron, mg/L.....	69.6	
Total manganese, mg/L.....	433.6	

\* TSS reanalyzed on the same day 144 mg/L.


  
Mary Stepp  
Lab Director  
Wanda Orso  
Water Lab Supervisor

Client: Sunnyside Gold Corp.

Site: AT SS 3  
IML #: F7483Date of report: 10/28/91  
Date received: 10/07/91  
Date sampled: 10/03/91  
Time sampled: 1230

	Result:	Date analyzed
Lab pH.....	7.35	10/14/91
Total dissolved solids (180), mg/L..	1288	10/15/91
Total suspended solids, mg/L.....	7	10/09/91
Total cadmium, mg/L.....	0.0071	
Total copper, mg/L.....	0.02	
Total lead, mg/L.....	<0.005	
Total mercury, mg/L.....	0.0005	
Total zinc, mg/L.....	1.64	
Total iron, mg/L.....	0.41	
Total manganese, mg/L.....	5.24	

\* TSS reanalyzed on the same day 8 mg/L.

  
Mary Stepp  
Lab Director  
Wanda Orso  
Water Lab Supervisor